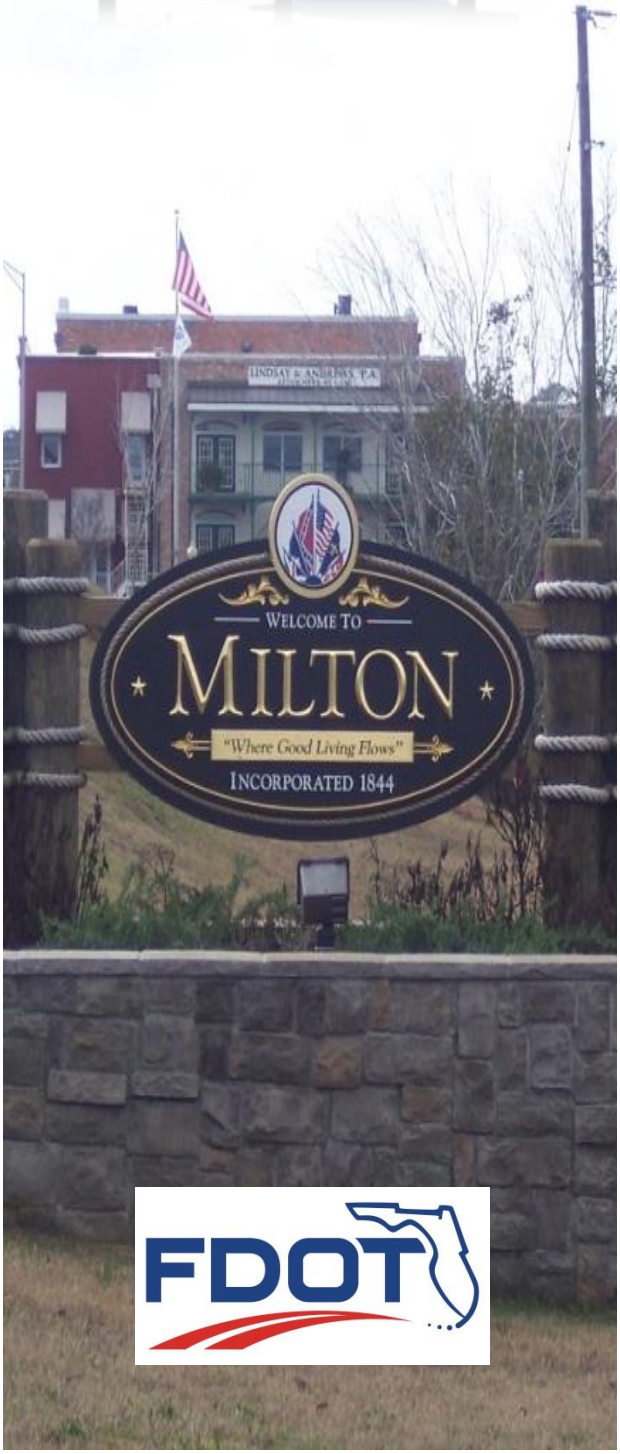
Environmental Impact Statement



Santa Rosa County
Florida

Financial Project No.'s:
416748-3-22-01, 416748-3-22-02,
416748-4-22-01, 416748-4-22-02,
and 416748-4-22-90
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TCSP 033 U, T129 348 R

December 12, 2013
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Update: September 19, 2014

Prepared For:
Federal Highway Administration

FHWA-FLA-EIS 13-04-D
Federal Highway Administration
Florida Division

ADMINISTRATIVE ACTION
ENVIRONMENTAL IMPACT STATEMENT

U.S. Department of Transportation Federal Highway Administration
and
Florida Department of Transportation

Financial Project No.'s:
416748-3-22-01, 416748-3-22-02,
416748-4-22-01, 416748-4-22-02, and 416748-4-22-90

Federal Aid Project No.:
SF1 296 R, S129 348 R, **TCSP 033 U, T129 348 R**

SR 87 from SR 87S to SR 87N, Santa Rosa County, Florida

The State of Florida Department of Transportation (FDOT) is conducting a study to evaluate potential options to provide a new roadway facility that will directly link SR 87S with SR 87N in the vicinity of the City of Milton in Santa Rosa County, Florida. The current connection between SR 87S and SR 87N is indirect and partly involves a shared facility of SR 87 and US 90.
Submitted pursuant to 42 U.S.C. 4332 (2)(c).

___ / ___ / ___
Date

_____
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A Federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

The FHWA will issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141, 126 Stat. 405, Section 1319(b) unless FHWA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to section 1319.

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List of Acronyms Used

ADA	Americans with Disabilities Act
AHP	Analytical Hierarchical Process
AN	Advance Notification
APE	Area of Potential Effect
AST	Aboveground Storage Tank
BEBR	Bureau of Economic and Business Research
BHST	Blackwater Heritage State Trail
BLLC	Bagdad Land and Lumber Company
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFA	Core Foraging Area
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CRAS	Cultural Resource Assessment Survey
CRPA	Cultural Resources Probability Assessment
CSER	Contamination Screening Evaluation Report
CSRP	Conceptual Stage Relocation Plan
CZMA	Coastal Zone Management Act
D3	District Three
DACS	Department of Agriculture and Consumer Services
dB(A)	Decibels on the "A" scale
EIS	Environmental Impact Statement
DHS	Florida department of State – Division of Historical Resources
DOD	Department of Defense
DOF	Department of Forestry
DSL	Division of State Lands
EPAC	Endangered Plant Advisory Council
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ERP	Environmental Resource Permit
ESA	Endangered Species Act
ESBA	Endangered Species Biological Assessment
EST	Environmental Screening Tool
ETAT	Environmental Technical Advisory Team
ETDM	Efficient Transportation Decision Making
F&A	Florida and Alabama Railroad
FAC	Florida Administrative Code
FAST	Florida-Alabama Strategic Task Force
FCMP	Florida Coastal Management Program
FDEO	Florida Department of Economic Opportunity
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FL-AL	Florida-Alabama

FLUCCS	Florida Land Use, Cover and Forms Classification System
FMSF	Florida Master Site File
FNAI	Florida Natural Areas Inventory
FPPA	Farmland Protection Policy Act
FS	Florida Statutes
FWC	Florida Fish and Wildlife Conservation Commission
FY	Fiscal Year
GIS	Geographic Information Systems
LDC	Land Development Code
LDCA	Location Design and Concept Acceptance
LEP	Limited English Proficiency
LOS	Level of Service
LRTP	Long Range Transportation Improvement Program
MAZ	Military Airport Zones
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAS	Naval Air Station
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOLF	Naval Outlying Fields, an auxiliary airfield associated with a Naval Air Station
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
NWFWMD	Northwest Florida Water Management District
NWI	National Wetlands Inventory
OFW	Outstanding Florida Water
OGT	Office of Greenways and Trails
OIP	Office of Intergovernmental Programs
ONRW	Outstanding National Resource Waters
PD&E	Project Development & Environment Study
PER	Preliminary Engineering Report
PIP	Public Involvement Program
RCW	Red-cockaded woodpecker
RFS	Reticulated Flatwoods Salamander
ROD	Record of Decision
ROR	Run Off Road
ROW	Right of Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SCH	State Clearinghouse
SHPO	State Historic Preservation Officer
SIS	Strategic Intermodal Systems
SR	State Road
SRCO	Site Rehabilitation Completion Order
SSL	Sovereign Submerged Lands
SSURGO	Soil Survey Geographic
STIP	State Transportation Improvement Plan

SWIM	Surface Water Improvement and Management
T&E	Threatened & Endangered
TAZ	Transportation Analysis Zones
TEAM Santa Rosa	A public/private partnership economic development organization
TIP	Transportation Improvement Program
Title VI	Civil Rights Act of 1964. Prohibits discrimination based upon race, color, and national origin.
TNM	Traffic Noise Model
TPO	Transportation Planning Organization
TSM	Transportation System Management
TTCP	Temporary Traffic Control Plans
UMAM	Uniform Mitigation Assessment Method
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau
USDA-NRCS	United States Department of Agriculture Natural Resources Conservation Services
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USMC	United States Marine Corps
USN	United States Navy
UST	Underground Storage Tank
WER	Wetland Evaluation Report
WRAP	Wetland Rapid Assessment Procedure
WW	World War
WWTP	Wastewater Treatment Plant

1. SUMMARY

1.1 Proposed Action

The State of Florida Department of Transportation (FDOT), in coordination with the Federal Highway Administration (FHWA) as the lead federal agency, is conducting a study to evaluate potential options to provide a new roadway facility that will directly link SR 87 South with SR 87 North in the vicinity of the City of Milton in Santa Rosa County, Florida. The FHWA will issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141, 126 Stat. 405, Section 1319(b) unless FHWA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to section 1319.

This study is being conducted utilizing the Efficient Transportation Decision Making (ETDM) Process. The ETDM process is composed of three phases which are planning, programming and project development. During the planning and programming phases, resource agencies review the purpose and need of the study, examine potential environmental and community impacts, and comment on these impacts. This information allows transportation planners to develop alternatives and minimize impacts within the study area in accordance with the agencies comments. The proposed project is currently in the Project Development and Environment (PD&E) Study phase, in which preliminary engineering is accomplished.

The primary objective of the project is to provide additional capacity, emergency evacuation, and to improve regional connectivity by providing a more direct route from areas of high growth in northern Santa Rosa County to I-10 and to areas further to the south. The current connection between SR 87 South and SR 87 North is indirect and involves a shared facility of SR 87 and US 90 (see Figure above). The improved north-south traffic flow will provide a more direct hurricane evacuation route and will more effectively serve the military bases in the project area. In addition, the project will reduce traffic congestion within the City of Milton, improving safety and reducing travel demand on the section of US 90 currently shared with SR 87. More information on the benefits to US 90 can be found in **Section 1.3** of this document, as well as in Section 10 of the **SR 87 Connector PD&E Study Design Traffic Technical Memorandum, dated October 2012.**

The proposed improvements include the provision of a new divided four lane, semi-controlled access facility from the US 90/SR 87S intersection to just north of the convergence of SR 87N and SR 89. It should be noted; however, that the new roadway is proposed to be built in two separate phases. Initially, it will include an interim two lane facility with a variety of pedestrian and bicycle improvements as described in Section 7.3 titled *Recommendations*. As demand increases, the road would be expanded to four lanes if needed to ultimately match the four lane sections at the existing SR 87S and SR 87N facilities. All right-of-way required for the ultimate four lane facility will be acquired during the first phase of the project.

In terms of the project genesis, this project has been reviewed and studied for many years under a variety of names. The Florida Alabama Strategic Task Force (FAST) previously considered it under the name "Brewton to the Beaches", while Santa Rosa County includes it in the "Better Santa Rosa Plan". Team Santa Rosa includes it as part of their future planning. In addition, the Corridor Authority, Santa Rosa County and the Florida-Alabama Transportation Planning Organization include it as the eastern leg of the overall Beltway Project that is planned to span both Escambia and Santa Rosa Counties in their Long Range Plans and Cost Feasible Projects. In addition, the Beltway Project was also studied by the Turnpike Enterprise. The results of the Turnpike study showed that the Beltway would be 20-30% feasible overall. The only segment that was determined to be feasible was the segment in this project's study area. The remaining portion of the Beltway project, from SR 87N to US 29 in Escambia County, remains in the TPO's LRTP Needs Plan (outside 2035). The following is a statement from the LRTP, "While the need for this project (Beltway) is beyond 2035 it was included in the LRTP as a regionally significant project that will serve as a limited access alternate to US 90 through Santa Rosa and Escambia Counties".

An Environmental Technical Advisory Team (ETAT) review was conducted in 2008 under Efficient Transportation Decision Making (ETDM) project #2861, however that effort only considered new improvements for the segment extending from SR 87 South/US 90 to Munson Highway. It was the intent at the time that this segment be the first phase of a corridor that would be eventually extended to SR 87 North. A "SR 87 Connector PD&E Study" was submitted on December 2009 for ETDM review as project #12597.

1.2 Other Major Government Actions

The following table summarizes the construction projects in the vicinity of the project study area as per the Florida-Alabama Transportation Improvement Program (TIP), amended April 2012. It should be noted that many of these projects are minor and are occurring outside of the study area, and would not impact the proposed action of this project.

Table 1.1 Projects in the Vicinity

Facility	Location	Improvements	FM Number
SR 10 (US 90)	Over Macavis Bayou (just south of Milton)	Replace structurally deficient bridge (Bridge #580013)	4229071
SR 281 (Avalon Blvd)	From SR 8 (I-10) to south of Commerce Road	Add Lanes and Reconstruct	2204126,7,8
SR 281 (Avalon Blvd)	From Garcon Pointe Bridge to North of SR 8 (I-10)	Maintenance - Resurfacing	4269721
SR 8 (I-10)	From west of Blackwater Bridge to east of Blackwater Bridge	Resurfacing	428731
Hamilton Bridge Road	From East Spencerfield Road to SR 89 Dogwood Drive	Resurfacing	4296821
SR 10 (US 90)	From east of CR 89 to 2.5 miles east of SR 87	Resurfacing	4246111
SR 8 (I-10)	From Escambia Bay Bridge to east SR 281 Avalon Blvd.	ROW future capacity (now is project priority # 3)	4130623
SR 8 (I-10)	From Blackwater River Bridge to Bridge Nos. 580167 & 580168	Bridge repair / rehabilitation: bridge painting	4235912

The Florida-Alabama Transportation Planning Organization (TPO) 2035 Long Range Transportation Improvement Program (LRTP) includes a PD&E study along US 90 from SR 87N to Airport Road to provide for the increase of capacity to four lanes via a new/realigned facility and a PD&E study along US 90 from Airport Road to SR 87S to widen to 4 lanes. The future development of this project will not conflict with the proposed action, but will further enhance traffic movements throughout the area. In addition, the county is planning to bring back transit services to the US 90 corridor. These services were suspended in recent years due to lack of funding.

Santa Rosa County has proactively developed a partnership with Whiting Field and other agencies to protect the military base missions as well as the unique environmental areas in the northern part of the county. The county plans to continue to purchase lands immediately adjacent and northeast of our proposed alternatives. The Project Team has been in close coordination with the County on the location of the county owned lands to ensure the alternatives do not impact these proposed conservation areas. Many of these lands are coordinated with the Florida Forever Acquisition List, as well as with the clear zone locations of the base. Currently, the county has purchased 637.52 acres and has assisted in the establishment of an additional 300 acres in protective easements.

1.3 Alternatives Considered

A multi-phase alternative development, evaluation and selection process was employed to properly assess all alternatives considered. Multiple options were considered for improving the existing deficiencies along SR 87 and US 90 such as various Transportation System Management (TSM) options, and various build alternatives in the form of new corridors.

The various TSM alternatives that were investigated included upgrading the existing facility by means of the following: 1) provision of physical and operational improvements to high crash spots or segments, 2) improving intersections and signalization and 3) improving signs, markings and delineation. In summary, even though some beneficial effects can be obtained through the use of low cost improvements, the overall capacity restriction of the existing roadway section precludes the attainment of any significant improvement in the overall project level of service.

The major build options had to consider the various components of providing a new, more direct facility with emphasis on operational characteristics, roadway geometry, safety and aesthetics. As shown in **Figure 1.1**, a total of six distinct corridors were originally considered (see Section 3 for details). The corridor evaluation and agency coordination resulted in the elimination of four of the original six corridors generally due to fatal flaws as a result of impacts to environmental lands purchased by funds set aside by the Florida Preservation 2000 Act, and/or the Florida Forever Act. The elimination of corridors was done by the FDOT, along with coordination from FHWA (See **Appendix A, Correspondence**).

The remaining two options (Alternatives 1 and 2) were further evaluated as part of the present effort and were altered due to comments received, see **Figures 3.4 and 3.5**.

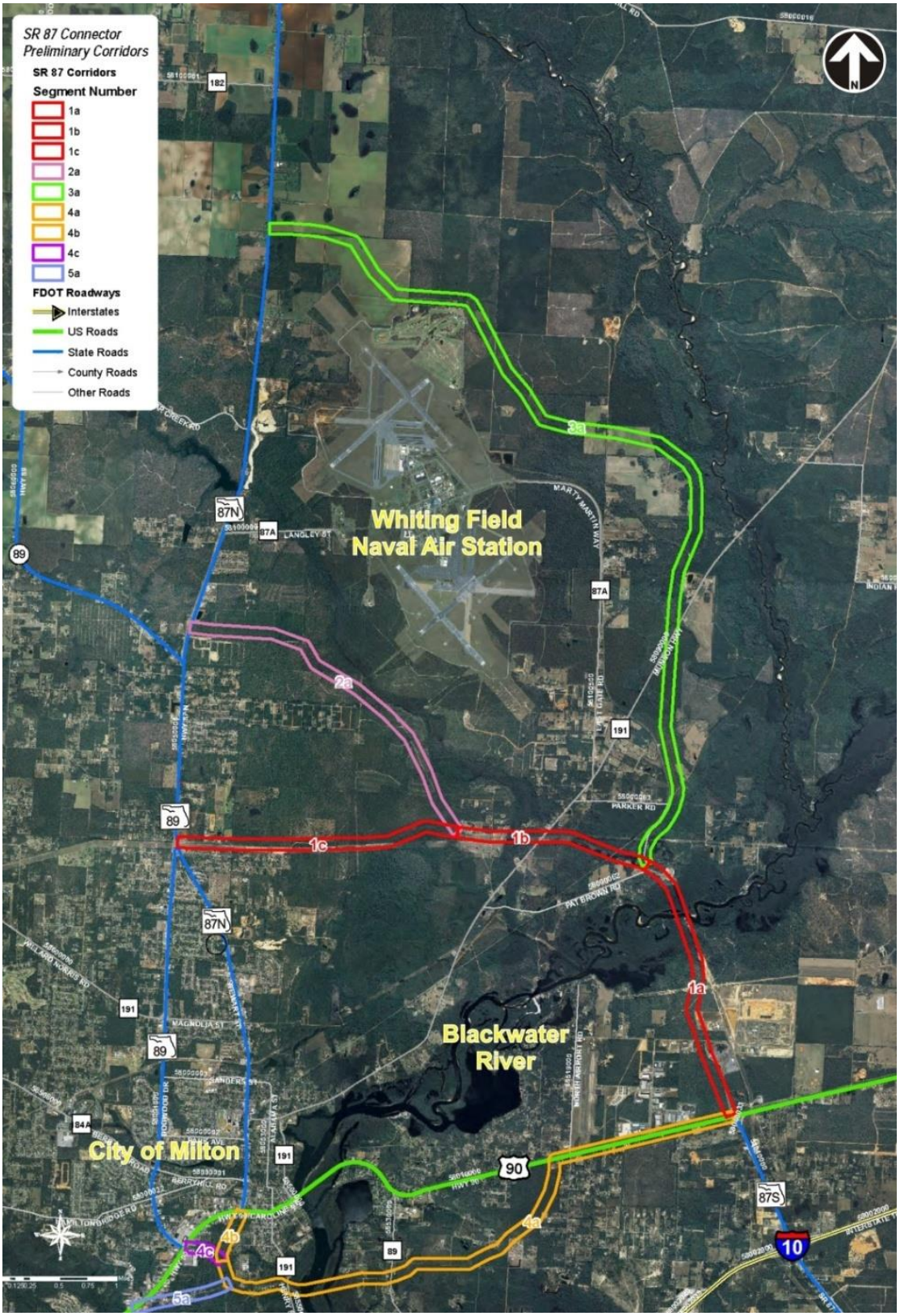
Alternative 1: This option extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the existing eastern power easement crossing. Once across the river, it runs parallel or adjacent to the power easement, then connects with SR 87N just north of the convergence of SR 87N and SR 89, utilizing the Oakland Drive right-of-way. This alternative is approximately 6.5 miles in length.

Alternative 2: Much like Alternative 1, this option also extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the easternmost existing power easement crossing. Once across the river, it continues slightly north of Alternative 1, and runs adjacent to the Clear Creek environmental lands, where it proceeds west to connect with SR 87N in the proximity of the northern split of SR 87N and SR 89. This option is approximately 8.2 miles in length.

SR 87 Connector is projected to carry approximately 11,000 vehicles daily in 2015; 15,000 in 2025; and 20,000 in 2035. This will provide much needed relief (18% reduction in trips) to the existing US 90 corridor which is currently functioning at capacity, or failing through the eastern portion of the City of Milton. The new roadway will function at better than a level of service of C for the opening year, and future design years. The SR 87 Connector is anticipated to provide a comfortable level of service for vehicles and trucks beyond 2035 as well. The operational performance of both alternatives is quite similar, with Alternative 1 carrying approximately 10% more traffic than Alternative 2. In addition, it offers a shorter truck route to serve Alabama and the northern parts of the county saving time and fuel. It also maximizes roadway capacity during hurricane evacuation of the beach areas.

Both Alternatives are proposed as a four lane, restricted access, divided highway with two sets of twin two lane bridges over the Blackwater River and the Blackwater Heritage State Trail (BHST), east of Milton and over Clear Creek, south of the Whiting Field Naval Air Station. The proposed roadway will also provide a 12 foot multi-use path on the west side of the roadway from US 90 to just north of the BHST.

Figure 1.1: Corridors Map



1.4 Major Environmental Impacts

At the intersection with Winston Brown Road, Alternatives 1 and 2 will result in direct impacts to two residential parcels. One of these parcels may require relocation due to the presence of a mobile home (7524 Eagle's Way). Due to existing damages noted during a field visit to a mobile home at 7530 Eagle's Way, it does not need relocation. Other direct impacts at these locations include access impacts and impacts to minor structures (ex: sheds). Alternative 1 also initially impacted one business on the east side of SR 87N/SR 89, resulting in the potential loss of parking, forced relocation of gas pumps and access issues. However, the alignment was shifted to avoid this impact. Alternative 2 will also impact two residential properties on the west side of SR 87N; one parcel will require relocation (7097 Highway 87N) due to the location of the proposed road to the mobile home. No business relocations are anticipated. The following are statements of findings for other relevant environmental impact categories *(See Section 5.1.5 Relocation).*

- In accordance with Executive Order 11990, wetlands were considered in developing and evaluating alternatives for the proposed action. Wetlands are present throughout the area and would be impacted by either alternative. The project would directly impact approximately 31 to 35 acres of wetlands of the nearly 57 acres of wetlands located within Alternatives 1 and 2. Refer to Sections 1.7 and 5.4.4 for additional information.
- The majority of the project alternatives were outside of the limits of the 100 year flood zone except within the immediate vicinity of the Blackwater River and Clear Creek. In addition, there's a risk for storm surge resulting from hurricanes within the project limits. Refer to Section 4.7 for additional information.
- Federally Listed Species: Designated Critical Habitat for Gulf sturgeon and reticulated flatwoods salamander is present within the corridor and would be impacted by the project. Formal Consultation under ESA Section 7 is required and was completed per the Services Biological Opinion issued on December 20, 2013 (See **Appendix I**).
- Wildlife and Wildlife Habitat: Alternatives 1 and 2 would result in similar impacts to wildlife and habitat. Potential habitat in both corridors has undergone degradation through commercial forestry operations, rural development, commercial development, and utility easements. Alternative 2 would impact more sandhill habitat than Alternative 1 (83 vs. 57 acres), but most of this habitat is in planted pines. Both corridors traverse similar amounts of seepage slope (19.2 acres), basin swamp (8.9 acres), and bottomland forest (18.5 acres). Approximately 1 acre of dome swamp would be impacted by Alternative 1, but not Alternative 2. Portions of the project corridor, including most of the bottomland forest habitat will be bridged which will reduce potential impacts.

There are no other major environmental impacts associated with the proposed action. Additional discussion concerning more detailed environmental consequences is included in Section 5.

1.5 Areas of Controversy

Generally speaking, there has been little controversy with the remaining Alternatives 1 and 2. Given the fact the project involves right-of-way purchases for the entire corridor, minimal property owner opposition has occurred. There have been comments from the public about a desire to have the new roadway south of US 90 to better assist in traffic reduction, but the southern alternatives faced environmental and connectivity issues that resulted in low scores and ultimate elimination in favor of Alternatives 1 and 2. There have been a few property owners south of Munson Highway that have expressed regret about losing the isolation and tranquility of their river front properties, but have also recognized the need for the project. Alternative 2 has been met with limited controversy from the Harvest Point neighborhood. This alternative is immediately adjacent to the neighborhood's northern boundary. At least one resident has spoken out about the road being put "next to their backyard". The location of Alternative 2 actually mitigates some of the impacts by providing a much safer condition for the neighborhood to access SR 87N with a traffic signal that currently does not exist. In addition, added landscaping and buffering can be provided adjacent to the neighborhood along its northern boundary.

There have been two issues raised by the United States Fish and Wildlife Service (USFWS). The first issue deals with potential impacts construction activities may have on the Gulf sturgeon that seasonally migrate through the portion of the Blackwater River near the location of the proposed bridge. This is an issue only during the construction of the piles that are within the water. The USFWS is also concerned with potential impacts to the existing critical habitat (Unit RFS-2, Subunit A) for the Reticulated flatwoods salamander (RFS). The alignment of the proposed roadway has been shifted to the peripheral and degraded edge of the habitat to avoid impacts to the primary habitat. Even in this area, the roadway has been elevated to further reduce potential impacts. The Mitigation measures developed and finalized as part of the ESA Section 7 consultation process have been incorporated into the commitments for this project.

1.6 List of Other Government Actions Required

This is a Federal Highway Administration (FHWA) project. No other government agency is serving as a cooperating agency. Review by the U.S. Environmental Protection Agency (USEPA) under the Safe Drinking Water Act – Section 1424(e) is required. The following permits will be required as part of this project:

1. Florida Department of Environmental Protection (FDEP) Environmental Resource Permit (ERP) (For Wetlands and Stormwater Treatment)
2. FDEP Sovereign Submerged Lands (SSL) Authorization (Public Easement)
3. US Army Corps of Engineers (USACOE) Clean Water Act Section 404 Dredge and Fill Permit
4. National Pollution Discharge Elimination System (NPDES) Permit
5. Endangered Species Act (ESA) Section 7 Consultation.

*FHWA has made the determination that a bridge permit is not needed from the USCG. (Reference **Appendix A**, March-May 2012 Correspondence in chronological order)*

1.7 Probable Adverse Environmental Effects Which Cannot be Avoided

Wetlands are present throughout the area and would be impacted by either alternative. The project would directly impact approximately 31 to 35 acres of wetlands of the nearly 57 acres of wetland located within Alternatives 1 and 2. Potential impacts will be avoided and minimized to the extent possible, including the bridging of the Blackwater River Floodway (designated Outstanding Florida Water (OFW)), the bridging of Clear Creek, installation of culverts to maintain connectivity, and use of Best Management Practices to minimize impacts outside the project boundary. Mitigation for unavoidable impacts can be accomplished under F.S. Section 373.4137, which allows FDOT to provide compensatory mitigation using mitigation banks and any other options that satisfy state and federal requirements. Coordination is on-going with regulatory agencies with responsibilities for wetlands, including the USACE, FDEP, and NWFWMD.

Potential impacts have been estimated for each alternative alignment, but final impacts will be based on the final design and will be addressed during permitting. Several agencies, including FDEP, EPA, NWFWMD, USFWS, NMFS, and USACE commented regarding potential wetland impacts, recommending minimization of wetland fill, avoidance of wetland areas, use of Best Management Practices, functional analysis of potentially impacted wetlands, and mitigation for unavoidable wetland impacts. These suggestions will be incorporated into the permitting and final design of the project.

The project crosses Gulf sturgeon designated critical habitat and would result in impacts associated with the bridge pilings. The Blackwater River is a designated critical habitat from the mouth of the Blackwater River to the confluence with Big Coldwater Creek, approximately 11 river miles upstream. Both alternatives cross designated critical habitat for the Gulf sturgeon.

The project also crosses designated critical habitat for the RFS. Both alternatives cross this critical habitat area; however, the alignment of both alternatives has been shifted to the peripheral and degraded edge of the habitat in order to avoid impacts to the primary habitat. This area would be bridged to further reduce potential impacts.

1.8 Irretrievable and Irreversible Commitment of Resources

In addition to the commitment of labor and materials for roadway construction, there will be a take of approximately 190-220 acres of land for highway purposes, removing it from its present use. The majority of the property impacted has a Land Use designation of Agriculture, Agriculture with Homestead or Silviculture (source: Santa Rosa County Geographic Information Systems (GIS) Department). Following is a break down for the proposed impacts:

Alternative 1 Land Use Impacts

Roadway ROW – 156 Acres

Agriculture, Agriculture with Homestead and Silviculture Impacts – 107.6 Acres
Commercial Impacts – < 1 Acre
Institutional – 17.9 Acres
Public Owned Property – 14.2 Acres
Recreational – < 1 Acre
Existing ROW – 2 Acres
Single Family Residential – 5.7 Acres
Vacant – 7.1 Acres

Ponds and Drainage – 32 Acres

Agriculture and Silviculture Impacts – 24.5 Acres
Institutional – 2.5 Acres
Vacant – 4.8 Acres

Alternative 2 Land Use Impacts

Roadway ROW – 181 Acres

Agriculture, Agriculture with Homestead and Silviculture Impacts – 132.9 Acres
Commercial Impacts – < 1 Acre
Institutional – 17.9 Acres
Public Owned Property – 14.2 Acres
Recreational – < 1 Acre
Existing ROW – 2.1 Acres
Single Family Residential – 3.3 Acres
Vacant – 8.6 Acres

Ponds and Drainage – 36 Acres

Silviculture Impacts – 28.4 Acres
Institutional – 2.5 Acres
Vacant – 4.8 Acres

In addition, 19.8 acres designated as Silviculture (the Gulf Power easement) will be impacted. Both alternatives will require relocation of some transmission poles. Coordination with Gulf Power is on-going in order to determine the extent of the impacts. The alignments for both alternatives are identical in this area, therefore they will have the same impacts. Finally, construction activities for the drainage structures (including fill and terrain alteration) will be in accordance with Best Management Practices for erosion control and water quality considerations to limit impacts outside of the project limits.

1.9 Feasible Measures to Avoid or Minimize Potential Adverse Impacts

Every effort to avoid residential, business and community services was made during the development of the initial corridors and the refinement of the alternatives. Depending on the alternative chosen, there will be one unavoidable residential displacement as addressed in Section 5.1.5, Relocation. Search data indicates there is an adequate supply of available

Comparable Decent Safe and Sanitary rental dwellings to meet the needs of potential displaced persons. No displacement of businesses, burial plots, or community services (i.e. churches, community centers, social services, etc.) is expected.

Likewise, environmental impacts were avoided to the fullest extent possible. The project proposes a bridge crossing over the Blackwater River and its floodway which includes bridging over the existing critical habitat for the RFS and the BHST. A bridge will also be provided over Clear Creek and culverts will be used to connect impacted wetlands where necessary. Pilings will be placed to limit direct impacts to threatened and endangered species. Spanning the entire floodplain and associated wetlands at Blackwater River and Clear Creek would substantially increase the proposed bridge lengths by approximately 2,300 feet and 1,285 feet, respectively.

In an effort to minimize direct impacts to the salamander critical habitat unit and indirect impacts to the breeding ponds, the entire critical habitat unit will be bridged and the alignment shifted south of the original proposed location to avoid impacts to the breeding ponds within the critical habitat unit. This bridge will be a continuation of the bridge over the Blackwater River so the same stormwater treatment conveyance system will be used to collect stormwater treatment from entering the critical habitat unit. Additional measures will take place during construction to reduce impacts.

The proposed alignment over the BHST will include the construction of a grade-separated overpass that will span the entire 100-foot wide trail corridor. No bridge pilings or other bridge infrastructure will be installed within the trail corridor. The construction of the crossing will not impact access to, or usage of the trail, neither will the project impact the vital functions of the trail.

1.10 Short-Term Impacts Versus Long-Term Benefits

The short-term impacts associated with the project that will exist during construction operations include items such as inconvenience to motorists and neighbors related to delays and detours. However, these conditions will be mostly limited to intersections and connection points. Temporary Traffic Control Plans (TTCP) will be developed and implemented as part of the construction operations to minimize such inconveniences.

Short term impacts will also be found due to the construction of the Blackwater River and Clear Creek Bridges. Pilings will be placed in wetlands as well as the Blackwater River. The construction of the pilings could potentially impact the Gulf sturgeon and the RFS, which are both on the federal and state endangered species lists. These pilings were selected to be 2-foot by 2-foot in size instead of 1.5-foot squared, which reduces the number of pilings per bent. Best Management Practices will be in place which will help reduce the anticipated impacts by the construction operations. Since Blackwater River is an OFW, additional requirements, such as full collection of stormwater runoff, will be required. The bridges will also be separated to allow light to reach below the bridge footprint. Although these impacts cannot be avoided, many measures will be taken to lessen the overall impact.

Temporary air pollution from fugitive dust and road emissions, along with noise associated with construction operations cannot be avoided, but will only be short-term.

Long-term benefits will result from the creation of this new facility. These include the fact that the new roadway will provide a connection north of US 90 and will redirect the northbound SR 87 traffic across US 90 to a point where it can reconnect with SR 87N north of the City of Milton. In addition, this provides an estimated 20% relief to the traffic volumes using US 90, thus providing relief to the over-capacity US 90 bridge, and reducing the high traffic volumes through the historic area of Milton. Likewise, much of the heavy truck traffic can be eliminated from the downtown area, thus reducing vibrations and pollutants that negatively impact the historic buildings.

One of the most significant benefits the SR 87 Connector will provide is its coastal evacuation potential. The evacuation options from vulnerable coastal areas in south Santa Rosa County are limited to SR 87 and SR 281 as well as US 98 in Escambia County. None of these routes provide for a direct north-south evacuation corridor through the county. Currently, SR 87 travels through the most congested areas of the City of Milton, and SR 281 does not continue north of US 90. Likewise, evacuees on US 98 must travel through Pensacola to I-110, which does not continue north of I-10. In addition, both SR 281 and US 98 are not available during high wind events due to high-rise bridge locations over the Bay that will likely close at high wind speeds, leaving SR 87 as the only available route with its smaller/shorter structures being more inland and protected. The 2010 Florida Statewide Regional Evacuation Study Program for the West Florida Region named SR 87 as a major evacuation route. The most vulnerable residents, located in Category 1 evacuation zones, are those located in all of Navarre Beach, the Gulf Breeze Peninsula, and all waterfront residents who live within 1,300 feet of water from the Okaloosa County Line to Escambia Bay, East Bay and East River. In addition, in East Milton just south and within our study area, all waterfront areas along Blackwater Bay, the Blackwater and Yellow Rivers and all residents who live within 2,600 feet of these bodies of water are also in Category 1 Evacuation Zone. During evacuations Level 2-5 (Corresponding to Hurricane Categories 2-5), the SR 87S and US 90 intersection and area just south on SR 87 are listed as a Critical Segments or a Critical Segments with Highest Queues. These critical segments are the areas where evacuees spend the most time waiting along the roadway network during traffic congestion.

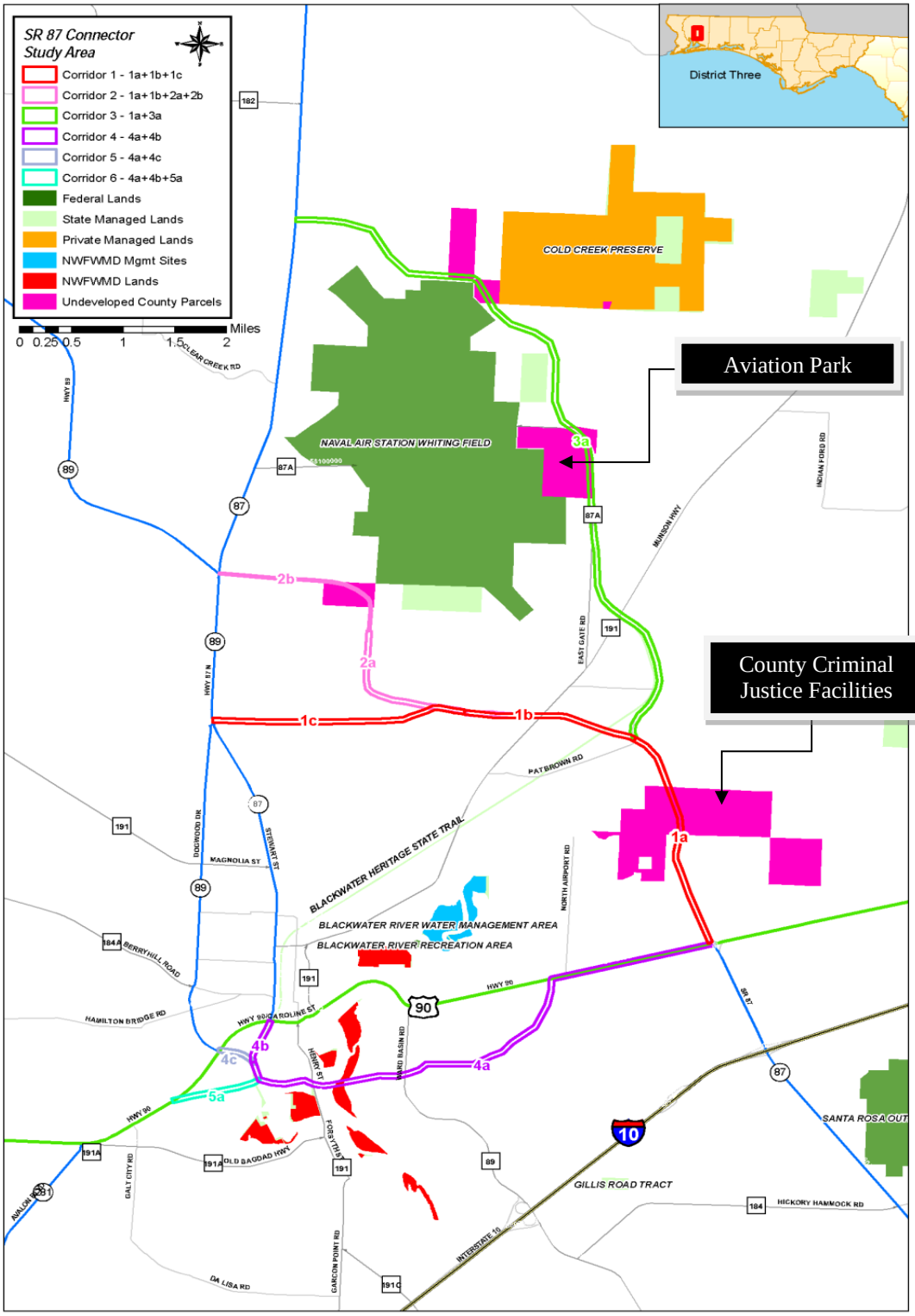
Likewise, the proposed facility provides for greater connectivity and mobility. The facility improves mobility to a greater extent by providing a new bridge crossing in a more strategic location accommodating both travel from the northeast and northwest to areas south, and the reverse for northbound travel. Greater mobility is afforded by providing an alternate to what would otherwise be channeling traffic through the congested areas of the City of Milton.
Both alternatives also provide better links north and south serving Whiting Field. Currently, Santa Rosa County is home to eight airfields utilized by the Navy, the largest being NAS Whiting Field. Whiting is supported by 14 Naval Outlying Fields (NOLF) spread throughout Santa Rosa County, Escambia County, Florida and the counties of Baldwin, Conecuh and Escambia in Southern Alabama. Whiting Field's mission is to provide services and materials to support the training of US Navy (USN), Coast Guard, Air Force, Marine Corps (USMC) and international student aviators in fixed-winged training as well as helicopter training. Whiting Field is responsible for 10% of the USN/USMC flight hours worldwide and is a vital

flight training area for the US Navy. This vital role in the nation's defense program also represents a large participation in the Santa Rosa County job base and economy. Thousands of military, civilian contractor, and private industry personnel and/or students work or train at this facility and efficient methods of transporting goods and people to and from the base are essential to the success of the base's mission. According to Randy Roy, the Whiting Field liaison for this project, in 2013, the average monthly vehicular traffic arriving to the base is 71,000. The traffic is mostly attributed to the gate facing 87N (65,000 vehicles on 87N and 6,000 at East Gate Road). This traffic includes delivery trucks and other support vehicles. Support personnel, military, Department of Defense (DOD), Civilian, etc. includes nearly 5,000 personnel. The SR 87 Connector will offer a more direct route to Whiting Field via the proposed intersection with Munson Highway without travelling along the congested US 90/SR 87 corridor. See **Appendix A** for addition information from Whiting Field (October 2013).

An additional long-term benefit is the multi-modalism the new facility will bring to the region. The project will address the need for greater bicycle and pedestrian connectivity in the County with a connection to the BHST. As there is no transit in the area, the multimodal improvements are based on the pedestrian and bicycle facilities provided in conjunction with the roadway, as well as connectivity to the Park and Ride Lot at US 90 and SR 87 S and the new Whiting Aviation Park located on the east side of NAS Whiting Field. The two most notable existing pedestrian or bicycle facilities in the region are the BHST and the US 90 Historic Trail. The proposed facility makes a much desired connection between the two facilities. Likewise, future links can be made to area parks and recreation facilities.

Lastly, the SR 87 Connector will assist in the economic development targeted by the County and the City of Milton east of the river by the fact that both alternatives provide relief to the congested sections of US 90. In addition to the City of Milton's and Santa Rosa County's economic development area near the Santa Rosa Airstrip and the Criminal Justice Center (See **Figure 1.2**), the County has also recognized Team Santa Rosa's efforts on a Joint Land Use Planning initiative. This initiative is a joint land use study that incorporates the land use planning efforts between Santa Rosa County and the NAS Whiting Field Military Installation. The study area encompasses a nearly 8,000 acre area around Whiting Field in northern Santa Rosa County and includes the previously mentioned aviation park on the east side of the base. Both alternatives indirectly serve this study area and provide a bypass around Milton and a more direct route to SR 87N.

Figure 1.2: Location Map



2. INTRODUCTION

2.1 Project Description

The State of Florida Department of Transportation (FDOT), in coordination with FHWA as the lead agency, is conducting a study to evaluate potential alternatives that would directly link SR 87S with SR 87N in the vicinity of the City of Milton in Santa Rosa County, Florida. The current connection between SR 87S and SR 87N is rather indirect and partly involves a shared facility of SR 87 and US 90 (see **Figure 2.1**). The proposed project is in the Project Development and Environment (PD&E) Study phase in which preliminary engineering is accomplished.

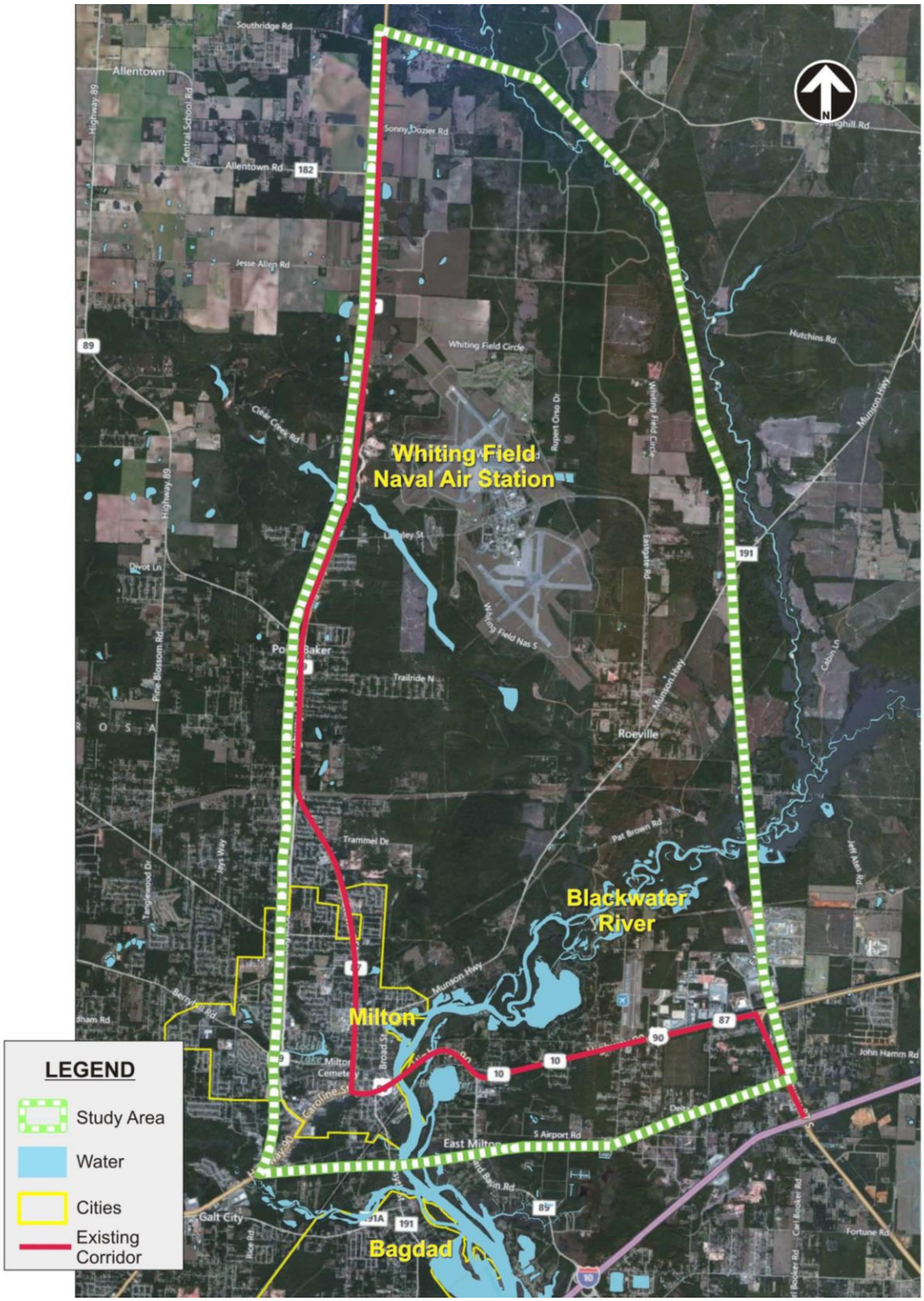
The primary objective of this SR 87 Connector project is to extend SR 87S to facilitate north-south traffic flow to more effectively serve the military base operations and to provide for a more direct hurricane evacuation route from the coast to areas north in Alabama. Another objective is to reduce traffic congestion within the City of Milton, and to alleviate travel demand on the section of US 90 currently shared with SR 87. Versions of this project have gone through ETDM screening as ETDM Project #2861 in 2008. However, that project was much more limited in scope and only evaluated a corridor from SR 87S to Munson Highway. On December 19, 2009 the SR 87 Connector project was submitted for ETDM review as Project #12597 (See **Appendix B**).

The new roadway will initially include a two-lane facility with four-lane improvements in the more urban areas at either end. In addition, the facility will include bicycle/pedestrian features with a link to the existing Blackwater Heritage State Trail. The proposed right of way and other design provisions will allow for future expansion to a four-lane. The alternatives are proposed to include two structures. The first structure spans Blackwater River and its associated wetlands and floodplains and includes bicycle/pedestrian upgrades. The second structure spans Clear Creek. The proposed project is in the Project Development and Environment (PD&E) Study phase in which preliminary engineering is accomplished.

2.2 Purpose of and Need for Action

This project is needed to provide for a new roadway facility linking SR 87S with SR 87N. This will serve as an alternative to the existing shared facility of SR 87 and US 90, which is a constrained facility that is currently operating at a failing level of service (LOS) F. Therefore, the primary need for this new corridor is to provide additional capacity, emergency evacuation, and to improve regional connectivity by providing a more direct route from areas of high growth in northern Santa Rosa County to I-10 and to areas further to the south. Likewise, access will be improved to and from I-10 for the Whiting Field U.S. NAS, and the County's Joint Use Planning Area near Whiting Field. It is also anticipated that this new roadway facility would provide relief to Ward Basin Road and its intersection with US 90, as well as the physically constrained US 90 bridge over the Blackwater River.

Figure 2.1: Project Study Area



2.2.1 Emergency Evacuation

SR 87 serves as a vital evacuation route for northbound traffic destined for I-65 in Alabama. During times of hurricane force winds, both the Pensacola Bay Bridge and the Garcon Point Bridge close leaving SR 87N to the interstate and beyond as the only access out of the beach areas of Gulf Breeze and Navarre, and is the only access into the area for Emergency First Responders. However, since a portion of the current corridor travels along a congested portion of US 90, through historic downtown Milton, it cannot function as a contiguous roadway. The project will address future projected deficiencies on an established emergency hurricane evacuation route.

2.2.2 Multi-modalism

This project will also address the need for greater bicycle and sidewalk connectivity within the county. This new north-south link over Blackwater River will establish a county-wide network that will serve the east and northeast portions of the county connecting a trail along US 90 to areas north of Whiting Field and State Lands. Most notably will be a connection between the Blackwater Heritage State Trail (BHST) and the Historic State Road 1 Trail. The BHST is a linear park that has been embraced by the community. There is a very active bicycling, horse riding, running, etc. population in the surrounding area that utilizes the trail, and future plans call for the trail's extension to both the north and south. The Historic State Road 1 Trail has just undergone a revitalization project that repaired much of its brick path, making it a desired trail as well. In addition, Whiting Field is in the process of expanding its trail system to circle its perimeter.

As there is no transit in the area, the multimodal improvements are based on the pedestrian and bicycle facilities provided in conjunction with the roadway, as well as connectivity to the Park-and-Ride Lot at US 90 and SR 87S and the new Whiting Aviation Park located on the east side of NAS Whiting Field.

2.2.3 Social Demand and Economic Development

Santa Rosa County is not only a bedroom community to the greater Pensacola area, but has also been experiencing considerable population growth of its own. This growth has spurred the need for an improved roadway network. In addition, major traffic generators in the area such as new residential developments, the Santa Rosa Criminal Justice Center, the Santa Rosa Corrections Facility, the Whiting Field U.S. NAS, the Team Santa Rosa Joint Planning area near Whiting Field, and the Santa Rosa Commerce Park on the US 90 corridor, would all benefit from the additional capacity this facility will provide. The need for the project is also related to committed trips associated with future development in the northern portions of Santa Rosa County, as well as the future development on the US 90 corridor east of Milton, which is hindered by the existing lack of capacity on US 90 through Historic downtown Milton and the single bridge crossing the Blackwater River.

2.2.4 Future Growth

As reported by the US Census Bureau 2010 Report, Santa Rosa County continues to be among the fastest growing counties in Florida. The county population has grown 150% (from just under 60,000 to over 150,000 people) from 1980 to 2010. According to the University of Florida's Bureau of Economic and Business Research (BEBR) Report and the FL-AL TPO 2035 Long Range Transportation Plan (LRTP), the population is expected to grow another 45% to nearly 220,000 people by 2035. This population growth will put further demand on the US 90/SR 87 segment, making growth and evacuation difficult due to a lack of roadway capacity.

In Traffic Analysis Zones adjacent to the corridor, population is anticipated to grow by 2,648 from 2,029 to 4,677, or 131%, between 1997 and 2020. Employment is projected to increase by 575 from 908 to 1,483, or 63%. The number of dwelling units is forecasted to rise by 1,114 from 827 to 1,941, or 135%. This projected growth is based on the 2035 Cost Feasible Transportation Model that was adopted in 2011 and accounts for the economic downturn of the past three years.

2.2.5 Traffic Data

There are six levels of service (LOS) defined for capacity analysis on roadways. They are given letter designations A through F, with LOS A representing the best range of operating conditions and LOS F the worst. The specific terms in which each level of service is defined vary with the type of facility involved. In general, LOS A describes a free-flowing condition in which individual vehicles of the traffic stream are not influenced by the presence of other vehicles. LOS F generally describes breakdown operations (except for signalized intersections) which occur when flow arriving at a point is greater than the facility's capacity to discharge flow. Levels of service B, C, D, and E represent intermediate conditions, with the lower bound of LOS E often corresponding to at or near capacity operations.

According to the Santa Rosa County Comprehensive Plan, the current adopted LOS Standard for US 90 is D. In 2008 before this study began, US 90 from Ward Basin Road to SR 87N had a failing level of service (LOS F). Without the proposed improvement, the operating conditions will continue to deteriorate. According to the SR 87 Connector Design Traffic Technical Memorandum dated October 2012, multiple sections of US 90 are expected to have a failing LOS by 2015. Without any improvements, the entire segment from SR 87S to SR 87N will fail by the design year of 2035.

SR 87 Connector is projected to carry approximately 11,000 daily vehicles in 2015; 15,000 in 2025; and 20,000 in 2035. While these volumes will provide some relief to traffic congestion along US 90, they are well within (and less than half) the daily capacity of a four-lane divided roadway with few signalized intersections. The SR 87 Connector is anticipated to provide a comfortable level of service (LOS C or better) for vehicles and trucks beyond 2035. In addition, it offers a shorter truck route to

serve Alabama and the northern parts of the county, saving time and fuel. It also maximizes roadway capacity during hurricane evacuation of the beach areas.

2.2.6 Safety/Crash Rates

A segmental crash analysis conducted along the present study corridor from 2005-2009 is illustrated on **Table 2.1 and 2.2**. Clearly, a significant number of crashes representing an average annual economic cost of $1,291,800 have occurred. It's interesting to note that most of the crashes have occurred at or near the US 90 intersections with SR 87S and SR 87N.

Location	Fatal	Injury	PDO	Total
US 90	$3,569,000	$365,200	$4,398,000	$8,332,200
SR 87N	$0	$291,100	$2,668,500	$2,959,600
Total	$3,569,000	$656,300	$7,066,500	$11,291,800

* Based on: (Fatality $2,600,000; Injury $36,000; PDO $2,000) Source: FHWA Tech Advisory T7570.2 (1994) updated to 2009 using GDP Price Deflator.

Likewise, the number and types of crashes were also gathered for several segments. The following is a summary of the five most predominant crash types on segments of US 90 and SR 87N, as well as bicycle and pedestrian crashes.

Crash Type, Years 2004-2009	Rear End	Angle	Side-swipe	ROR	Left Turn	Bike (#)	Pedestrian (#)
US 90 from SR 87N to Ward Basin	42.3% (41)	22.7% (22)	10.3% (10)	9.3% (9)	3.1% (3)	2	1
US 90 from Ward Basin to SR 87s	39.2% (56)	18.6% (30)	7.8% (8)	11.8% (13)	4.9% (6)	0	0
SR 87N from US 90 to Harvest Point	19.7% (23)	28.2% (33)	2.6% (3)	13.7% (16)	8.5% (10)	3	3

The majority of crashes on SR 87S from I-10 to US 90 occurred at the US 90/SR 87S intersection. The crashes along US 90, from SR 87S to SR 87N were distributed throughout the segment. There was, however, a slightly higher concentration of crashes at the US 90/SR 87N intersection. The single fatality in the segment occurred at milepost 13.847 just east of Ward Basin Road. The crashes along SR 87N from US 90 to Southridge Road were generally distributed throughout the segment. The six pedestrian/ bicycle crashes on SR 87N all occurred at different intersections, with no concentration in any one area. However, two out of the three pedestrian/ bicycle crashes on US 90 occurred in the historic downtown Milton area just west of the Blackwater River bridge, with the final at Ward Basin Road.

On the portion of US 90 that is shared with SR 87, the majority of crashes are Rear End collisions, followed by Angle collisions. This portion of roadway is generally a two lane typical section, with turning lane improvements at signalized intersections. This segment of US 90 had an Actual Crash Rate for years 2005, 2006, 2007, and 2009 that exceeded the statewide average for other roads of similar type in Florida with enough statistical significance to be considered outside of random variation (>99.9%). On SR 87N from US 90 to Harvest Point (location of intersection with Alternative 2), Angle collisions are the most prominent followed by Rear End and Run off Road (ROR) collisions. This roadway is generally a four lane divided typical section. SR 87N had higher crashes than the statewide average for 3 out of the 5 years, but only 2008 was statistically considered outside of random variation.

Rear End collisions are indicative of congested conditions where there is stop-and-go traffic, inadequate gaps between vehicles, large numbers of turning vehicles, drivers unaware of intersections, etc. Angle collisions are indicative of restricted site conditions, large intersection volumes, excessive speeds at approaches, etc. ROR crashes are generally due to inadequate shoulders, inadequate roadway design, narrow lanes and improper channelization. It should be noted that on SR 87N, the clusters of these type of accidents occurred at a median change, from a continuous bidirectional median to a restricted median, and at the intersection where SR 87 and SR 89 converge. According to the Highway Safety Improvement Program Manual, the countermeasures for Rear End collisions are to widen the roadway, add turn lanes, add warning/flashing signals, reduce speed, etc. Countermeasures for Angle collisions include removing sight obstructions, add traffic lanes, or reroute traffic. The countermeasures for ROR crashes are to improve pavement markings, upgrade roadway shoulders, widen lanes, reduce congestion, improve channelization, relocate islands, etc.

Presently, SR 87 follows along the congested US 90 corridor for five miles. This portion of the corridor is operating generally at a LOS F and is the area where the only fatality in the study area occurred. Improvements to the existing roadway in this vicinity are difficult due to the historic downtown Milton area. Currently having only the US 90 two-lane bridge crossing the Blackwater River, all vehicle trips from the east and SR 87S to as far south as Navarre Beach, as well as trips heading north up Ward Basin Road, are forced to cross the US 90 bridge exacerbating it's congestion. The SR 87 Connector will provide a new roadway to connect SR 87S and SR 87N. This will reroute through-traffic headed north from I-10, and is projected to remove 18% of the traffic off of US 90 east of Milton in the study area. By developing a new corridor that does not follow the existing US 90 alignment, the traveler would be able to avoid this high traffic area. With this new and additional river crossing afforded by Alternatives 1 or 2, the traffic can be expected to re-distribute. Trips from east US 90 and SR 87S that are destined for SR 87N, Whiting Field or Munson Highway will no longer be forced to use the US 90 Bridge and go through the congestion of downtown Milton. Likewise, trips using northbound Ward Basin Road will have the option to head east on US 90 to connect with the Connector crossing the river at the new location. This redistribution of traffic would also hold true for the opposite flow of traffic as well.

This proposed roadway is projected to carry approximately 11,000 daily vehicles in 2015; 15,000 in 2025; and 20,000 in 2035. While these volumes will provide some relief to traffic congestion and therefore improve safety and crash rates along US 90, they are well within (and less than half) the daily capacity of a four-lane divided roadway with few signalized intersections. This provides a comfortable level of service for vehicles and trucks beyond the year 2035; offers a shorter truck route to serve Alabama and the northern parts of the county saving time and fuel; and maximizes roadway capacity during hurricane evacuation of the beach areas. More information about improvements to Safety can be found in ***Section 5.1.6, Mobility***.

2.2.7 Planning Consistency

The proposed new facility is consistent with the Santa Rosa County Comprehensive Plan and is included in the County's Future Transportation Corridors map. Policy 4.1.E.2 of the Comprehensive Plan states, "The County shall continue to request, recommend, and support immediate roadway improvements in order to relieve the congestion on the segment of US 90 between Canal Street and SR 87S". Likewise, both the County planning staff and the liaison for Whiting Field NAS reviewed and commented on the alternatives to ensure their location did not alter the mission of the base, which is also protected by the County's Comprehensive Plan.

In addition, the SR 87 Connector PD&E study was initially included in the 2009-2013 adopted State Transportation Improvement Plan (STIP) and the TPO TIP (Study began in 2009). It is also included in the current Florida Alabama TPO TIP in Table 2, *FY 14-18 Non-Strategic Intermodal System (Non-SIS) Project Priorities* and in the Appendix. This project is also in the TPO's 2035 Long Range Transportation Plan (LRTP). It is listed as a Roadway Capacity Project in the Needs Plan as 'SR 87 Connector' and in the Beyond 2035 Projects as the 'Outer Beltway Connector'. The Design Phase is also listed in Fiscal Year (FY) 2016-2020 of the Cost Feasible Plan (CFP) in the latest Florida Alabama TPO LRTP (See **Appendix C**). This over $14 Million earmark by the TPO is a commitment to use allocated TPO funds for future phases of this project. The amount assigned by the TPO in their CFP is considerably more than the estimated design costs of either alternative, and will ensure the next phase will not be impacted by fiscal constraints. Likewise, approximately $5 Million has been set aside for the Design Phase as a candidate project in the FDOT Work Program. The ROW phase (FY 2041-2050) and Construction Phase (FY 2046-2055) are beyond the 2035 LRTP. The FDOT District Planning Department staff is working with District Administration and the TPO to ensure the design funds are available in FY 2016-2020. In addition, as ROW and Construction funding amounts are finalized for the preferred alternative, the planning level estimates in the CFP will be amended to reflect the updated costs. See the following table for project phase cost summary.

Phase	$ Millions Alt 1/Alt2	Time Frame	Funding Type
PE (from LRTP)	$14.71/$14.71	2016-2020	State/Federal
ROW	$5.06/$5.63	2041-2050	State/Federal
Construction	$116.78/$120.41	2046-2055	State/Federal
Totals	$136.55/$140.75		

A four-lane facility is not needed for the design year evaluated in this study. It is the intent for the project to initially build an interim two-lane facility and as demand increases, the road would be expanded to four lanes to ultimately match the four-lane section of the existing SR 87S and SR 87N (see **Figures 2.2-2.5**). Sufficient right-of-way (ROW) will be acquired in the first phase of the project for the future four-laning to be consistent with the STIP, LRTP and TIP as well as to comply with recent legislation (HB 1359-SB 7121) which stipulates that *"the adopted level of service for out-of-county hurricane evacuation is maintained for a Category 5 storm event as measured on the Saffir-Simpson Scale" and with Florida Administrative Code 9J-5.012(3)(b)(6) and 9J-5.012(3)(b)(7).*

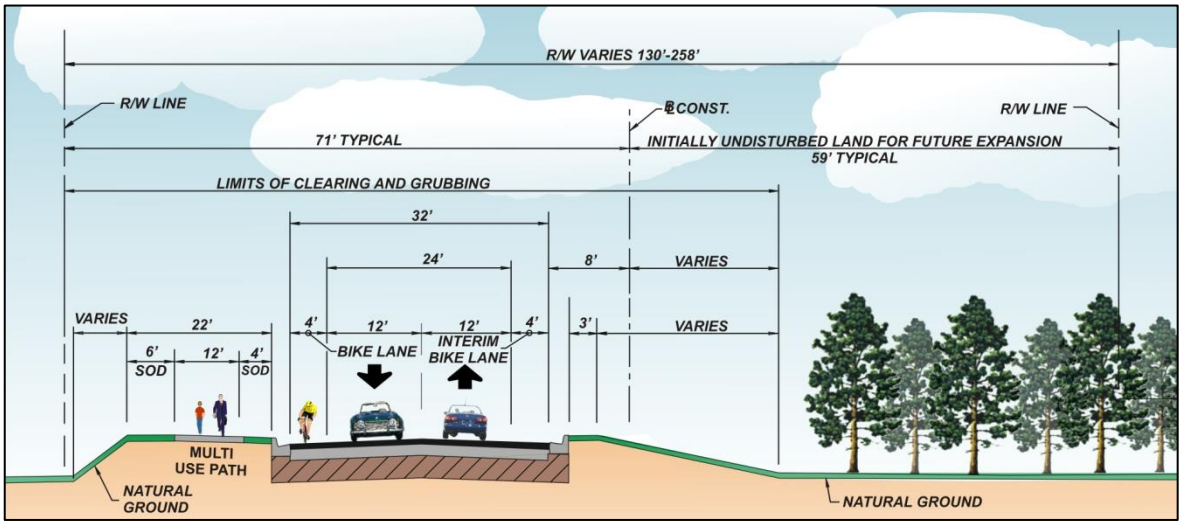


Figure 2.2: Proposed Interim Urban Typical Section

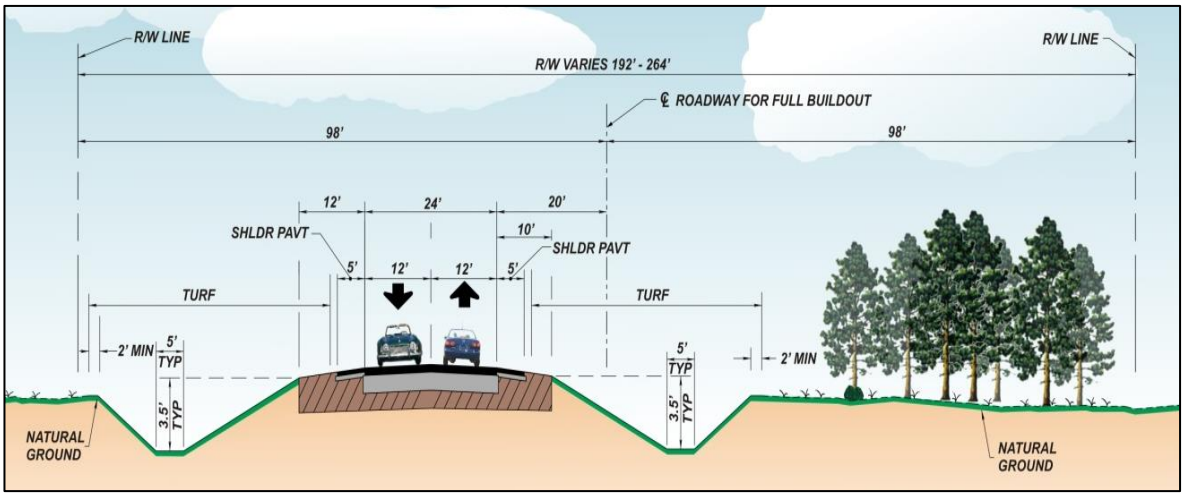


Figure 2.3: Proposed Interim Rural Typical Section

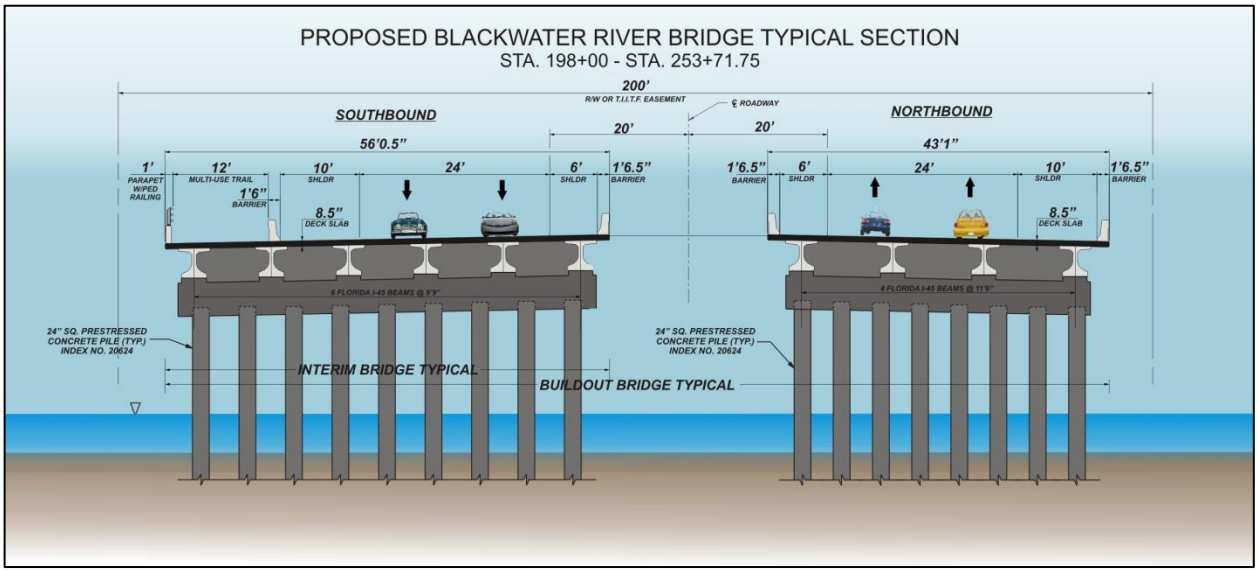


Figure 2.4: Blackwater River Bridge Typical

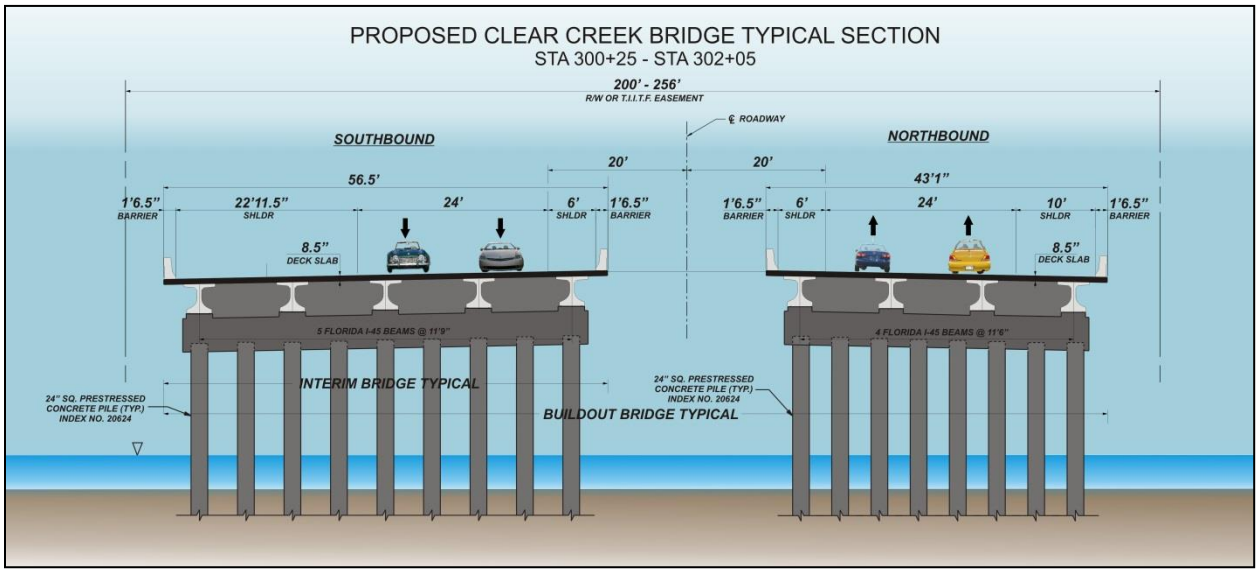


Figure 2.5: Clear Creek Bridge Typical

3. ALTERNATIVES INCLUDING THE PROPOSED ACTION

As illustrated in **Figure 3.1**, a multi-phase alternative development, evaluation and selection process was utilized to properly assess all alternatives considered for the proposed improvements of the SR 87 Connector within the project limits. Essentially, three (3) different phases comprised the alternative selection process for the proposed project as illustrated in the figure. Those alternative options found most feasible, meriting further development and evaluation, are shown in yellow in the evaluation table, shown in **Figure 3.3**. A discussion of each of the three (3) different phases follows:

3.1 Phase One: Conceptual Design Analysis

3.1.1 No Build Alternative

The "No Build" alternative assumes retaining existing conditions. It is the "no-action" option and is generally used as a benchmark condition in order to compare the costs and benefits of implementing the proposed improvements to those incurred by continuing to use the existing facility. The existing problems and concerns would remain essentially unchanged, with all of the geometric, operational and connectivity deficiencies.

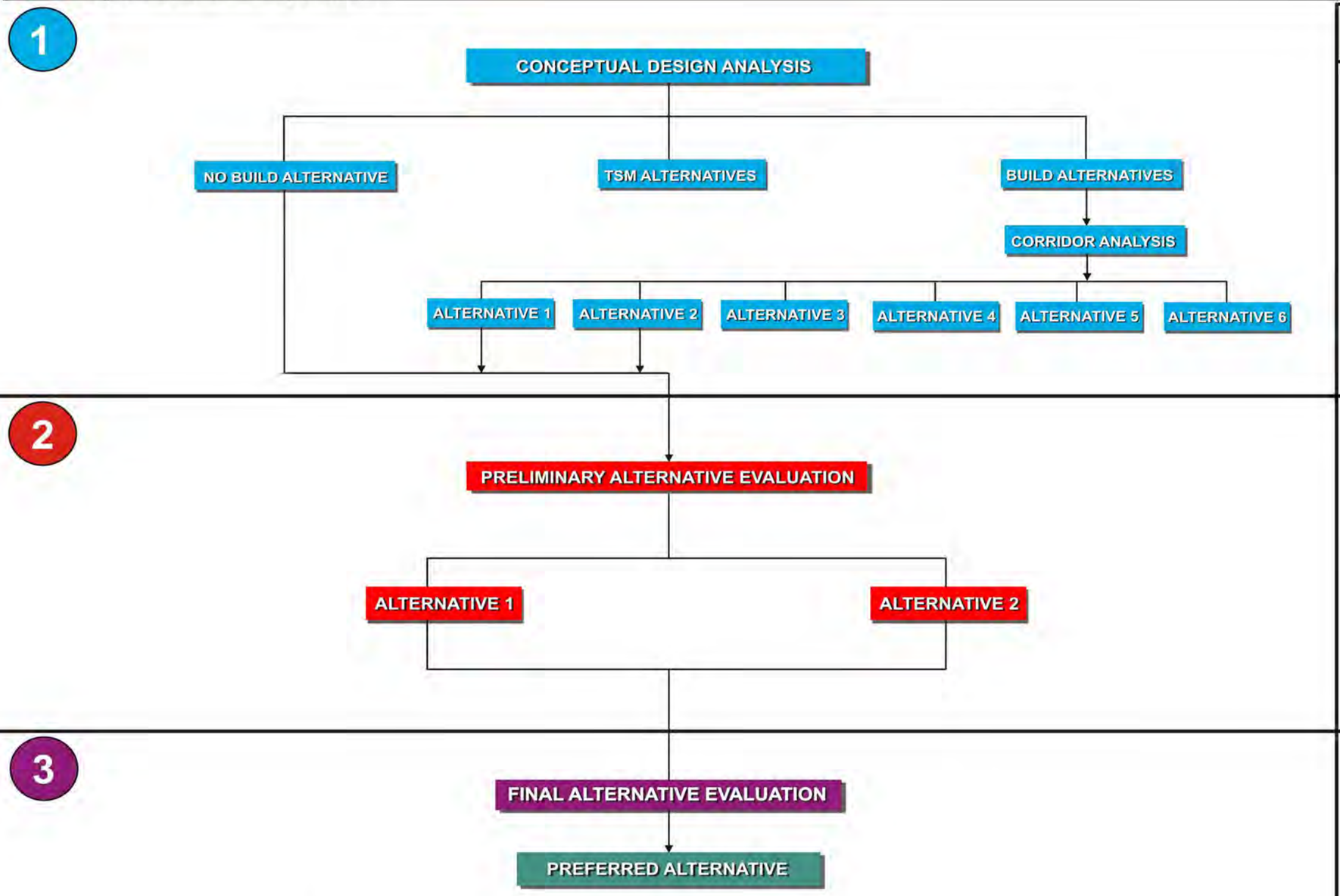
The purpose of the SR 87 Connector PD&E study is to find a solution to the regional connectivity needs of SR 87 in Santa Rosa County. In this alternative, a connection between SR 87S and SR 87N will not be implemented. The existing facility not only lacks the necessary continuity to effectively serve the evacuation and linkage needs of the area it serves, but also is inadequate in terms of existing and future capacity and meeting the needs of the abutting land uses. The existing roadway alignment of SR 87 does not meet the local or regional needs due to the existing shared section of SR 87 and US 90. As a result of the shared corridor, there continues to be a lack of north-south connectivity for evacuation and travel north to Alabama; there is no connection for the regional multi-modal facilities in the county; there continues to be capacity issues limiting economic development east of Milton and in East Milton; safety concerns due to crashes resulting from congestion will not improve; and access between the military bases on SR 87S to Whiting Field on SR 87N is not enhanced.

Likewise, during the development of the Design Traffic Technical Memorandum, it was found that the No Build Alternative performed poorly. Five (5) roadway segments along US 90 would operate at failing LOS in 2015, nine (9) segments in 2025, and eight (8) in 2035. Both Build Alternatives will divert traffic from US 90 and reduce the number of failing segments along US 90 to two (2) segments in 2015, five (5) segments in 2025 and three (3) segments in 2035. All other roadway segments with the build alternative will operate at acceptable LOS. For further information regarding the conditions resulting in the No Build scenario, refer to Table 3, *Future Daily Traffic Volumes* in **the SR 87 Connector Design Traffic Technical Memorandum.**

It is evident that adoption of this "No-Build" alternative would not solve any of the existing needs associated with the project. However, the "No Build" alternative will be maintained as a viable option through the Public Hearing.

3.1.2 Transportation Systems Management (TSM) Alternatives

Should the "No-Build" Alternative prevail, the Transportation Systems Management (TSM) options will be evaluation. These alternatives are comprised of minor improvements options that are usually generated to alleviate specific traffic congestion/safety problems, or to get the maximum utilization out of the existing facility by improving operational efficiency. These alternatives do not serve as a benchmark function but rather they insure that a wide range of realistic alternatives are considered by decision makers. The various TSM alternatives that were investigated included upgrading the existing facility by means of the following: 1.) provision of physical and operational improvements to high accident spots or segments, 2.) improving intersections and signalization and 3.) improving signs, markings and delineation.



PHASE DESIGNATION	PURPOSE
CONCEPTUAL DESIGN ANALYSIS	CONCEPTUAL CONSIDERATION OF MINOR AND MAJOR OPTIONS INCLUDING THE ANALYSIS OF ALTERNATIVE CORRIDOR OPTIONS
PRELIMINARY ALTERNATIVE EVALUATION	FURTHER REFINEMENT OF THE RESULTS OBTAINED IN THE PREVIOUS PHASE USING A NUMERICAL/DESCRIPTIVE MATRIX APPROACH
FINAL ALTERNATIVE EVALUATION	DETERMINATION OF OPTIMUM ALTERNATIVE BY USING THE ANALYTICAL HIERARCHICAL ANALYSIS (AHP) APPROACH

Table 3.1 provides a preliminary evaluation conducted for the various potential TSM strategies considered along the project limits. As indicated in the table, it is expected that these TSM improvements alone will not alleviate all of the existing corridor deficiencies, nor would they suffice to meet current and future travel demand.

Table 3.1 Evaluation of TSM Alternatives

TSM ALTERNATIVES	CONSEQUENCES OF IMPLEMENTATION
Physical and operational improvements to high accident spots or segments and segments operating at LOS F	▪ Most or all of the existing facility has a high number of accidents and therefore would require improvements throughout. ▪ There are three major existing segments along US 90 currently operating at LOS F. ▪ Major reconstruction would be the only way to significantly improve safety due to the severity of deficiencies and congestion along the existing facilities. Reconstruction of the existing US 90 has been deemed unfeasible especially in the vicinity of Historic Downtown Milton due to severe and unavoidable impacts to important historic resources. An alternative corridor that avoids this historic district has been previously found to be the only way to reduce congestion along the existing US 90 corridor.
Improved intersections and signalization	▪ Only slight improvements to existing problem intersections such as US90/SR 87S and US90/SR 87N. ▪ Will not alleviate any of the major existing deficiencies.
Improved signing, markings and delineation	▪ Only slight improvements in guidance and possibly safety. ▪ Will not alleviate any of the major existing deficiencies.

In summary, even though some beneficial effects can be obtained through the use of low cost improvements, the overall capacity restriction of the existing roadway section precludes the attainment of any significant improvement in the overall project level of service. It is because of this fact that these alternatives were considered to have little value. Therefore, it is recommended that the TSM alternatives be rejected and only the major reconstruction options be considered for further study.

3.1.3 Strategic Intermodal System (SIS) Alternatives

The portion of SR 87S south of I-10 is part of Florida's Strategic Intermodal System (SIS) network. However, the designation does not extend any further north than I-10. Where the SR 87 Connector links with SR 87S at US 90, there is no such designation. Likewise, SR 87N from US 90 to the Alabama State Line is not part of the SIS network. In addition, the SR 87 network north of I-10 is not designated as an emerging SIS facility, nor is it part of the planned SIS network.

As such, the SIS design standards were not used in the development of the Connector design. This was also consistent with the Value Engineering efforts associated with the project.

3.1.4 Construction Alternatives

Based on the preceding analysis, it was determined that various major (build) alternatives would have to be developed within the study area. These major build options had to consider the various components of providing a new, more direct facility with emphasis on operational characteristics, roadway geometry, safety and aesthetics. A comprehensive corridor alternatives evaluation summary report was prepared for this project. Six new corridors were identified and evaluated for improved mobility and safety. **Figure 3.2** illustrates the original six corridors, and a brief description of each option follows:

The Corridor segment make up is as follows:

Corridor 1 (Segments 1a+1b+1c)	Corridor 4 (Segments 4a+4b)
Corridor 2 (Segments 1a+1b+2a)	Corridor 5 (Segments 4a+5a)
Corridor 3 (Segments 1a+3a)	Corridor 6 (segments 4a+4b+5a)

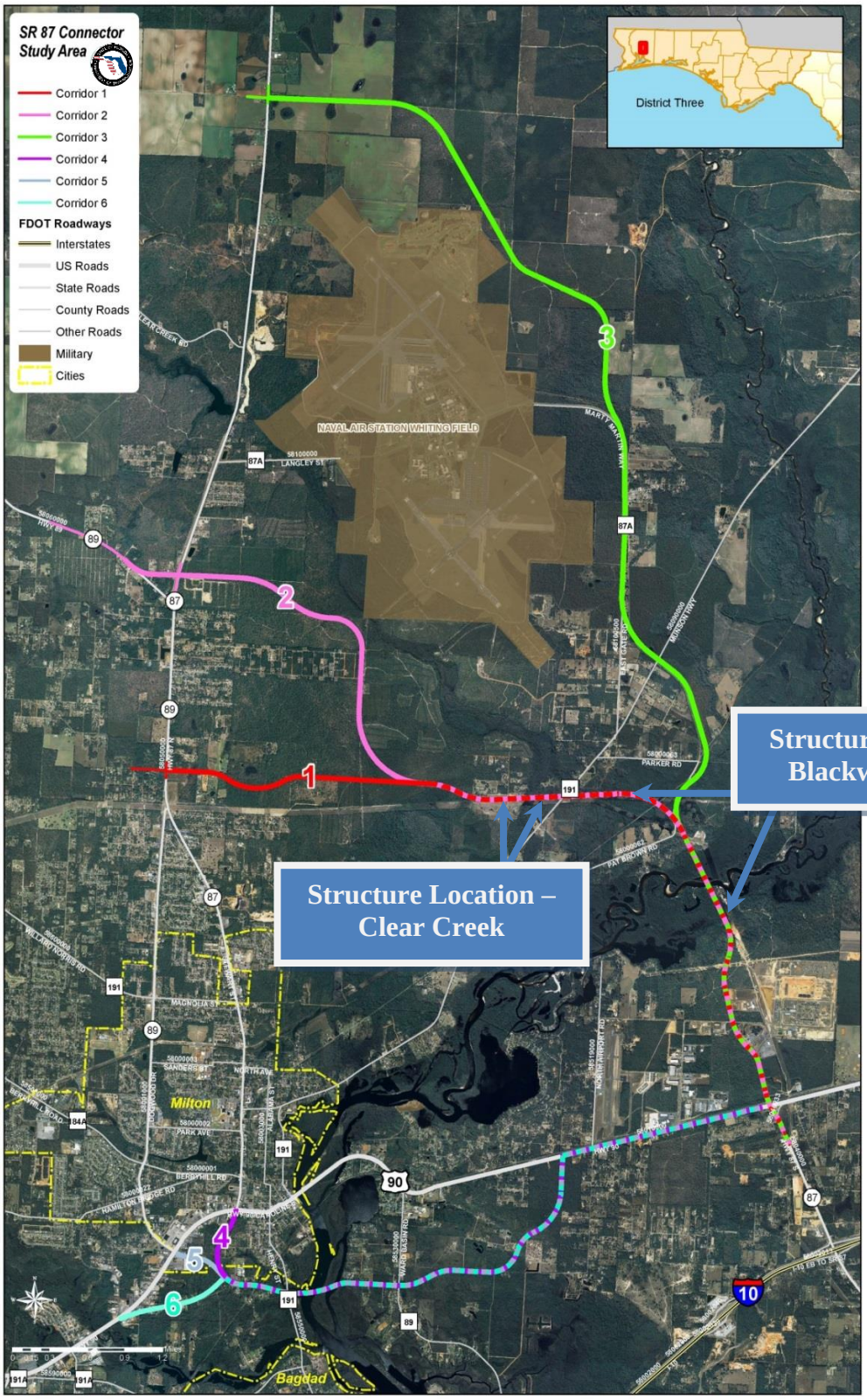
Corridor 1: As shown in Figure 3.2, this corridor extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the existing eastern power easement crossings. Once across the river, it runs parallel or adjacent to the power easement, then connects with SR 87N just north of the convergence of SR 87N and SR 89, utilizing the Oakland Drive right-of-way. This corridor is approximately 6.5 miles in length.

Corridor 2: Much like Corridor 1, Corridor 2 also extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the eastern most existing power easement crossing. Once across the river, it continues slightly north of Corridor 1, and runs adjacent to the Clear Creek environmental lands, where it proceeds west to connect with SR 87N in the proximity of the northern split of SR 87N and SR 89. This corridor is approximately 8.2 miles in length.

Corridor 3: Like Corridors 1 and 2, Corridor 3 also extends north from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the eastern most existing power easement crossing. Once across the Blackwater River, the corridor proceeds north on the east side of Whiting Field possibly utilizing portions of the Pat Brown Road right-of-way. Once north of Whiting Field, the corridor traverses a narrow gap between the Nature Conservancy/Florida Forever Lands and Whiting Field and south of Southridge Road. This corridor is approximately 10.5 miles in length.

Corridors 4-6: These Corridors evaluate areas to the south of US 90, and will involve a new river crossing between Bagdad and Milton. The southern corridor will generally head west from SR 87S using a portion of the US 90 right-of-way that can accommodate widening, and reconnect with SR 87N at the US 90/SR 87N intersection. The western end of this corridor near SR 87N will utilize the right-of-way of the BHST, and incorporate the trail into the roadway's cross section. This corridor may be approximately 5.6 to 6.5 miles in length depending on which option is selected. (The options for this corridor include Corridor 4, as well as the different terminus locations that make up Corridor 5 and Corridor 6.)

Figure 3.2: Alternative Corridors



The initial corridor evaluation entailed the determination of the effectiveness of each corridor in attaining the following goals:

1) The stated project's purpose and need
2) Improving the existing and projected traffic conditions within the project area
3) Avoiding or minimizing adverse environmental impacts within the project area
4) Minimizing cost expenditures

Figure 3.3 illustrates the results of each evaluation component. It should be noted that each component is based on a ranking system. The methodology used in the corridor analysis (Figure 3.3) was part of the Corridor Alternative Evaluation Summary Report which was approved by FDOT February 17, 2011. A rank of 1 reflects that the alternative is the best, while the higher numbers are reflective of less effective performances. If there is a tie, the corridors received the same rank, with the next highest score receiving the next available corridor ranking. For instance, under OFW in the Environmental Rankings, Corridors 4 - 6 included the same impact so all scored a '1'. Since three corridors scored a '1', the next score available was a '4'. Likewise, Corridors 1-3 had the same impacts, they all scored a '4' illustrating that all tied for 4th best Corridor. In terms of the evaluation summary, it is inherently clear that the least expensive alternative might provide the worst traffic service, or have a generally higher environmental impact. Therefore, how important is minimizing cost versus traffic service or environmental impacts? In order to quantify this dilemma, members of the consultant's team, reflecting a broad range of professional backgrounds, were asked to provide their perceived degree of importance (weights) for each of the four evaluation parameters (e.g. – purpose and need, compatibility, traffic service, environmental impacts and cost). The resulting relative weights shown in the final evaluation summary of Figure 3.3 serve as an additional aid in evaluation, and are thus reflective of the average of the individual weighting results submitted by the team. Compliance with the project's Purpose and Need was judged to be the most important parameter with an overall weight of 40% (0.40), while cost (construction and ROW) was the least important at 10% (.10). In order to determine the final scoring, each individual rank was multiplied by the assigned parameter weight and the resulting score added for all evaluation parameters. The corridors with the lowest resulting total scores are the more successful options. For example, as previously shown under the "Purpose and Need" comparison, Corridor 1 was the most successful, so this score was multiplied by the relative weight and a resulting score was obtained (1 x 0.4 = 0.4). This methodology of comparing corridors has been successfully used, in coordination with FDOT and FHWA, in obtaining Location Design and Concept Acceptance (LDCA) on over 15 PD&E studies throughout the state of Florida over the past 20 years. According to the results shown on the table in Figure 3.3, Corridors 1, 2, and 3 were the top three performers.

It should be noted that Corridors 4, 5, and 6 traverse protected lands owned by the Northwest Florida Water Management District (NWFWMD). Multiple State and Federal ETAT members identified that these alternatives had substantial impacts to water quality, wetlands, wildlife and habitat, historical sites, recreational areas, floodplain and parks. Additional coordination was conducted with the NWFWMD to

explore avoidance and mitigation issues concerning these lands. Several design options were explored (e.g. – bridging the area, etc.). The project team was notified by the NWFWMD that the property was purchased through a unique funding source, Preservation 2000 bonds, made available by the Florida Preservation 2000 Act, and they disputed the alternatives that passed over these properties. Their dispute justification is as follows: "The proposed use is incompatible with the purpose for which District lands were acquired under the Florida Preservation 2000 program with public funds of the Florida Preservation 2000 Trust Fund, such purpose is to protect valuable natural resources. (Florida Preservation 2000 Act: Florida Statute 259.101(7))." The Preservation 2000 Act was succeeded by the Florida Forever Act in 1999 and continues as Florida's conservation and recreation lands acquisition program. It is the largest program of its kind in the United States. The use of funding for this program to purchase lands is highly scrutinized to ensure the properties are worthy to be protected natural resource lands. Once the funds are utilized, the lands are protected into perpetuity and cannot be sold, or their use changed from the lands intent of the purchase. There are, however, limited provisions in place that enable exceptions to the laws and restrictions associated with the use of natural resource lands. They include, but are not limited to:

a) **Florida Administrative Code 18-2.015.** This code enables request to be heard for the use of uplands. It is geared for uses of the property that are compatible with the property's intent. It enables only temporary leases. As this is a lease program for compatible land uses, it would not be applicable for a land purchase by FDOT.

b) **Florida Administrative Code 18-2.021.** This code enables the State to sell surplus lands that are of no longer value to the program. The lands are highly scrutinized to justify and prove they are no longer valued for the intent they were purchased. As this deals with protected lands that no longer have value towards their intent, it would not be applicable to the lands in question.

In addition to the two exceptions noted above, there are two adopted Policies that also provide some leniency in the purchase of natural resource lands.

c) **Policy for Incompatible Use of Natural Resource Lands**, approved August 9,1988 by the Board of Trustees of the Internal Improvement Trust Fund. This policy is geared to potential use of the land if it is in the interest of the public. As stated, "The public interest determination will be based on a careful weighing of the likely adverse impacts of the use on natural resource lands against the public benefits of the proposed use. Factors to be assessed in the public interest determination include but are not limited to conservation, environmental concerns, wetlands, fish and wildlife, historic and archaeological resources, economics and aesthetics, land use, water quality and quantity, navigation, public safety, and degree of public use and enjoyment of the natural resources lands". However, article (c) of this policy dictates that the use may be authorized if "there is no practicable alternative to the proposed use that would have less adverse impact on such lands or public use of them..." In this study, there are practicable alternatives that can be developed, and are in fact, better performing with regards to the other study factors.

d) **Policy: Use of Natural Resource Lands by Linear Facilities**, as approved by Board of Trustees of the Internal Improvement Trust Fund, on January 23, 1996. This policy may be the most applicable because it does provide for "public transportation corridors"; however, it too has an avoidance requirement. Article **(c) Avoidance** states "Owners and operators of linear facilities must avoid location on natural resource lands unless no other practical and prudent alternative is available and all steps to minimize impacts as set forth below are implemented. The test of practicality and prudence will compare the social, economic, and environmental effects of the alternatives." As stated earlier, there are practicable alternatives.
In light of this fact, Corridors 4, 5, and 6 were deemed fatally flawed and proved to be unfeasible by FHWA (See Correspondence in the **Appendix A**, multiple meeting minutes included, FHWA determination August 8, 2011). In addition, further coordination with FHWA has resulted in the removal of Corridor 3 from further consideration. This action is due to the fact that this corridor traverses lands recently purchased by the Florida Department of Environmental Protection (FDEP) using Florida Forever funds. This purchase not only blocked passage of Corridor 3 but also blocked any other nearby potential corridors that might have been explored. As a result, FHWA approved the elimination of Corridor 3 as well.

In summary, only Corridors 1 and 2 remain as viable build options and subject to further investigation.

Figures 3.4 and 3.5 illustrate typical sections, geometrics and drainage details associated with the two remaining viable alternatives. Additional information concerning these options is included in the Correspondence in the **Appendix A.**

Purpose and Need Rankings

Corridor	Crit. 1 Connection between 87S and 87N	Crit. 2 Hurricane Evacuation	Crit. 3 Improve Mobility, consistent with LRTP	Crit. 4 Connectivity to WFNAS and Park	Crit. 5 Multi-Modalism	Crit. 6 Economic Dev.	Subtotal	Resulting Rank
1	1	3	1	3	2	1	11	1
2	2	2	2	2	3	2	13	3
3	3	1	3	1	1	3	12	2
4	5	7	5	7	5	5	34	5
5	6	7	6	7	6	6	38	6
6	4	7	4	7	4	4	30	4

Traffic Evaluation Rankings

Corridor	Overall Regional Effect	Traffic Relief on US 90 and Downtown	Vehicle Miles Traveled (VMT)	Subtotal	Resulting Rank
1	1	4	3	8	1
2	2	5	2	9	2
3	3	6	1	10	4
4	5	2	4	11	5
5	6	3	4	13	6
6	4	1	4	9	2

Cost Rankings*

Corridor	Right-of-way Costs	Construction Costs			Total Estimated Costs	Resulting Rank
		Roadway Cost	Low Level Bridge Cost	High Level Bridge Cost		
1	$2.24	$45.83	$55.40	N.A.	$103.47	4
2	$2.74	$57.88	$55.40	N.A.	$116.02	5
3	$2.20	$78.57	$42.60	N.A.	$123.37	6
4	$4.09	$42.75	$41.00	$59.8**	$87.84/$106.64	1
5	$13.49	$41.47	$41.00	$59.8	$95.96/$114.76	2
6	$8.38	$50.70	$41.00	$59.8	$100.08/$118.88	3

* Costs are in millions
** Blue text represents costs associated with high level bridge. High level bridges were not reviewed for northern corridors due to the USGS ruling the waters were not commercially navigable in the crossing area

Environmental Rankings

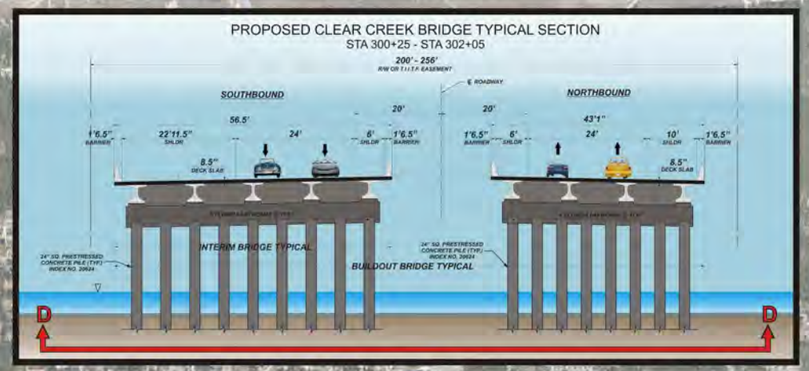
Env. Criteria \ Corridor	Corridor Scoring					
	1	2	3	4	5	6
Wetlands	3	2	1	5	4	6
FNAI	3	2	1	6	4	5
Habitat	6	4	3	2	1	5
Floodplain	2	3	1	5	4	6
T/E Species*	1	1	1	1	1	6
OFW**	4	4	4	1	1	1
Black Bear	0	0	0	0	0	0
FFWCC 1-5	1	2	6	4	3	5
FFWCC 6-10**	4	4	4	1	1	1
Pristine Lands	4	5	6	2	1	3
FEMA	4	5	3	2	1	6
Noise	4	6	5	2	1	3
CRAS	1	3	1	4	4	6
Social	1	3	2	5	4	6
Total Score	38	44	38	40	30	59
Resulting Rank	2	5	2	4	1	6

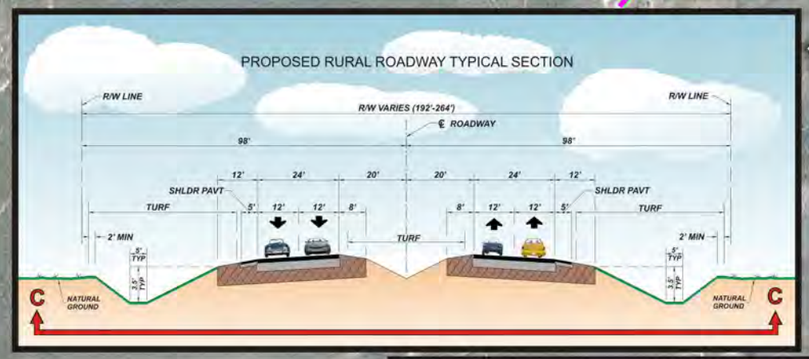
* Only Corridor 6 had impacts
** Tie between the Northern or Southern Corridors

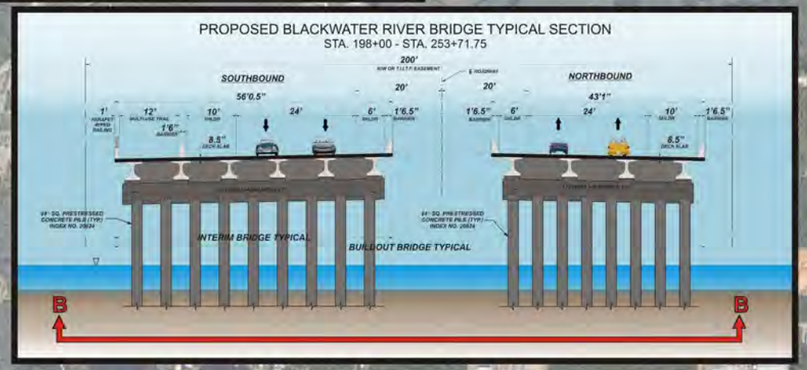
Final Corridor Evaluation Summary

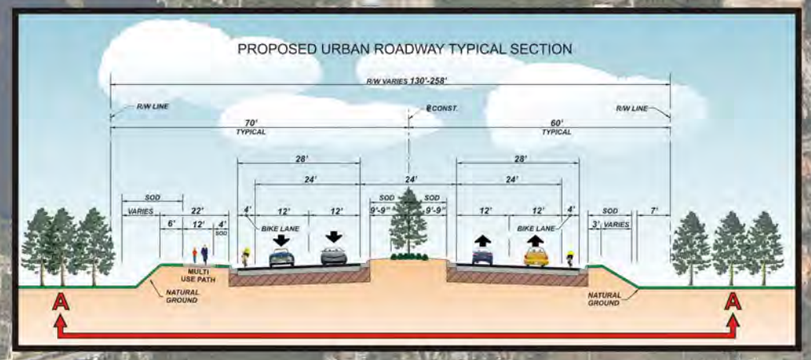
40% Relative Weight
0.40 Resulting Score

Corridor \ Evaluation Parameter	Purpose and Need 40%		Traffic 20%		Cost 10%		Environmental 30%		Final Rank (Score)
1	1	0.40	1	0.20	4	0.40	2	0.60	1 (1.60)
2	3	1.20	2	0.40	5	0.50	5	1.50	3 (3.60)
3	2	0.80	4	0.80	6	0.60	2	0.60	2 (2.80)
4	5	2.00	5	1.00	1	0.10	4	1.20	6 (4.30)
5	6	2.40	6	1.20	2	0.20	1	0.30	4 (4.10)
6	4	1.60	2	0.40	3	0.30	6	1.80	6 (4.10)





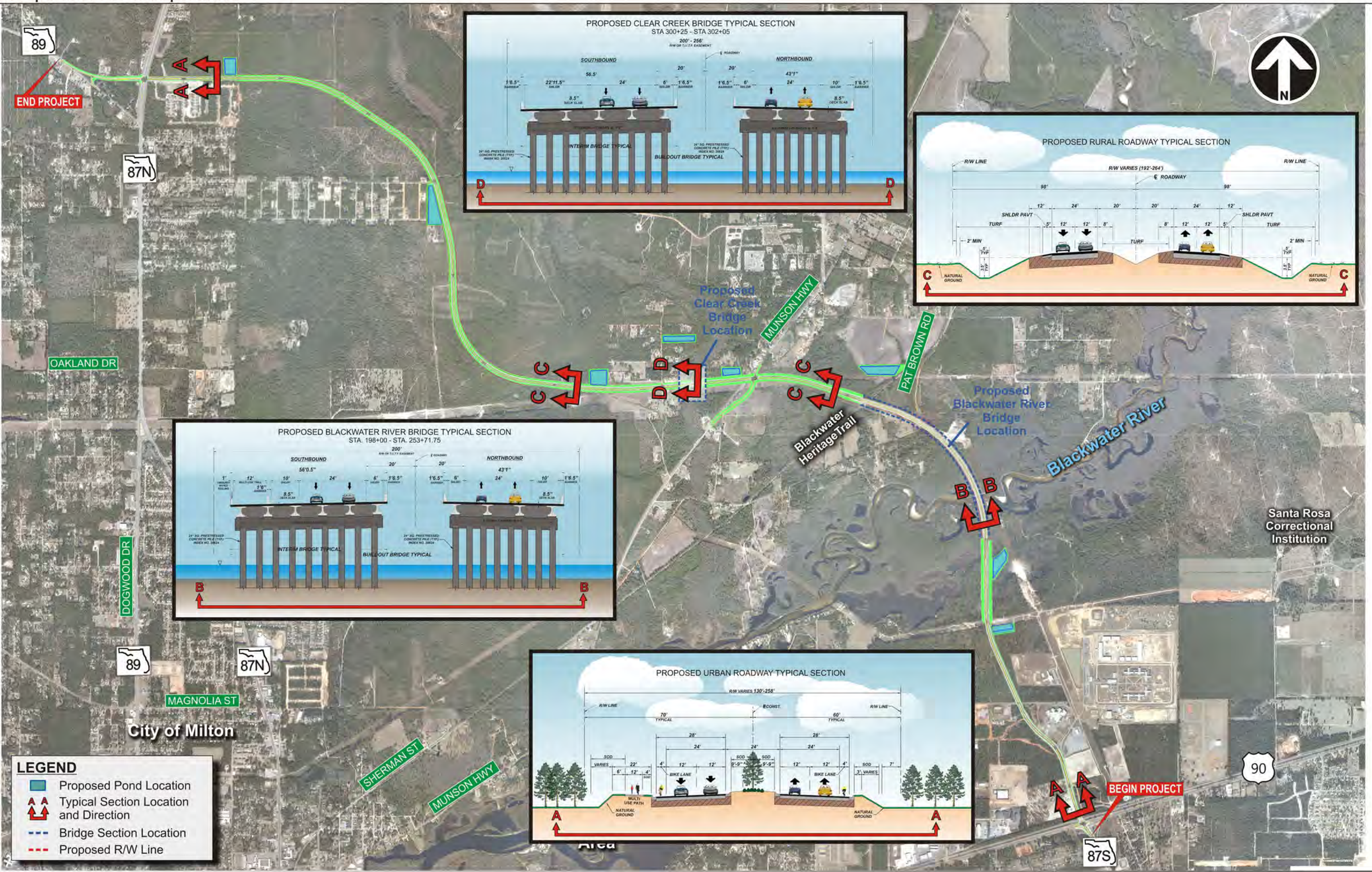




OAKLAND DR
FOREST DR
END PROJECT
87N
Proposed Clear Creek Bridge Location
MUNSON HWY
PAT BROWN RD
Blackwater Heritage Trail
Proposed Blackwater River Bridge Location
Blackwater River
89
MAGNOLIA ST
DOGWOOD DR
City of Milton
SHERMAN ST
Blackwater River Water Management Area
Santa Rosa Correctional Institution
90
BEGIN PROJECT
87S

LEGEND

- Proposed Pond Location
- Typical Section Location and Direction
- Bridge Section Location
- Proposed R/W Line


PROPOSED CLEAR CREEK BRIDGE TYPICAL SECTION
STA 300+25 - STA 302+05
SOUTHBOUND
NORTHBOUND
INTERIM BRIDGE TYPICAL
BUILDOUT BRIDGE TYPICAL
PROPOSED RURAL ROADWAY TYPICAL SECTION
R/W LINE
R/W VARIES (192'-264')
℄ ROADWAY
SHLDR PAVT
TURF
2' MIN
NATURAL GROUND
PROPOSED BLACKWATER RIVER BRIDGE TYPICAL SECTION
STA. 198+00 - STA. 253+71.75
PROPOSED URBAN ROADWAY TYPICAL SECTION
R/W VARIES 130'-258'
BIKE LANE
MULTI USE PATH
SOD
89
87N
87S
90
END PROJECT
BEGIN PROJECT
OAKLAND DR
DOGWOOD DR
MAGNOLIA ST
SHERMAN ST
MUNSON HWY
PAT BROWN RD
Proposed Clear Creek Bridge Location
Proposed Blackwater River Bridge Location
Blackwater River
Blackwater Heritage Trail
Santa Rosa Correctional Institution
City of Milton
LEGEND
Proposed Pond Location
Typical Section Location and Direction
Bridge Section Location
Proposed R/W Line

3.2 Phase Two: Preliminary Alternative Evaluation

Included in this section is a numerical/descriptive matrix **(Table 3.2)**, which illustrates, describes and evaluates the features of the remaining alternatives under consideration. The evaluation used involved the generation of a weighting scheme for each of the evaluation parameters. Each criterion was separated into sub-criteria to be evaluated. Fourteen (14) different sub-criteria including engineering, socio-economic, environmental and cost factors were used. Each sub-criteria weight was assigned a weighted value depending on its degree of importance within the criterion, totaling the overall criterion number. These parameter weightings were developed from the average of individual weighting sets prepared by members of the consultant's team reflecting a broad range of professional backgrounds. In addition, the alternative performance with respect to each parameter was compared using two criteria; 1.) the overall effect on the specified parameter and/or 2.) the relative effect between the competing corridor alternatives.

The overall effect received one of the five judgmental values (++ = 1.00, + = 0.80, o = 0.60, - = 0.40, -- = 0.20). However, if any of the alternatives had an overall negative effect, then the worst alternative received a (--) and the relatively better alternative received a higher score (-). If any two values were approximately equal, then they both received the relatively lowest score. If the alternatives had an overall positive effect, then the best alternative received a (++) and the relatively worse alternative received a lower score (+). A common value, therefore, signifies an equal overall and relative effect.

This evaluation involves a combination of both qualitative and quantitative values resulting in an overall score. Each score indicated on the table is the result of multiplying the judgmental analysis rating times the relative weight for those criteria. For example, Alternative 2 under the parameter "Wetland Impacts" was given a designation of "-" (judgmental value = "0.40") since it has substantial wetland impacts and crosses Outstanding Florida Waters (OFW) and special flood zones. This judgmental value of 0.4 was then multiplied by the relative weight of the parameter (9) resulting in an overall score of 3.6.

The results from this analysis indicate that Alternative 1 obtained the highest total score and, as expected, the No Build Alternative was the least attractive option. It should be noted that the objective of this phase was not necessarily to determine which option was the best, but rather to identify which alternative(s) were clearly inferior so that they can be eliminated before even more stringent evaluation criteria and procedures were used during the next evaluation phase. The Final Alternative Evaluation Phase (please see the Preliminary Engineering Report (PER) prepared for this project) used the Analytical Hierarchical Process (AHP), a multi-criteria decision method based on pair-wise comparisons, to evaluate the Alternatives with more stringent criteria. The results (See **Figure 3.6**) indicated that Alternative 1 scored better than Alternative 2 in each of the primary criteria (mainly due to the fact that it has less noise impacts, would better alleviate congestion on US 90 and would be less costly). However, a final recommendation for the preferred alternative will be made only after the public hearing transcript and comments on the PER and environmental document have been evaluated.

LEGEND

Judgemental Values

++	SUBSTANTIALLY POSITIVE EFFECT OR BEST ALTERNATIVE	=	1.0
+	GENERALLY POSITIVE EFFECT OR GOOD ALTERNATIVE	=	0.8
O	GENERALLY NO EFFECT OR MODERATE ALTERNATIVE	=	0.6
-	GENERALLY NEGATIVE EFFECT OR INFERIOR ALTERNATIVE	=	0.4
- -	GENERALLY NEGATIVE EFFECT OR WORST ALTERNATIVE	=	0.2

37 CRITERIA WEIGHT
12 SUBCRITERIA WT
2.4 RESULTING SCORE

PRELIMINARY ALTERNATIVE EVALUATION

Table 3-2

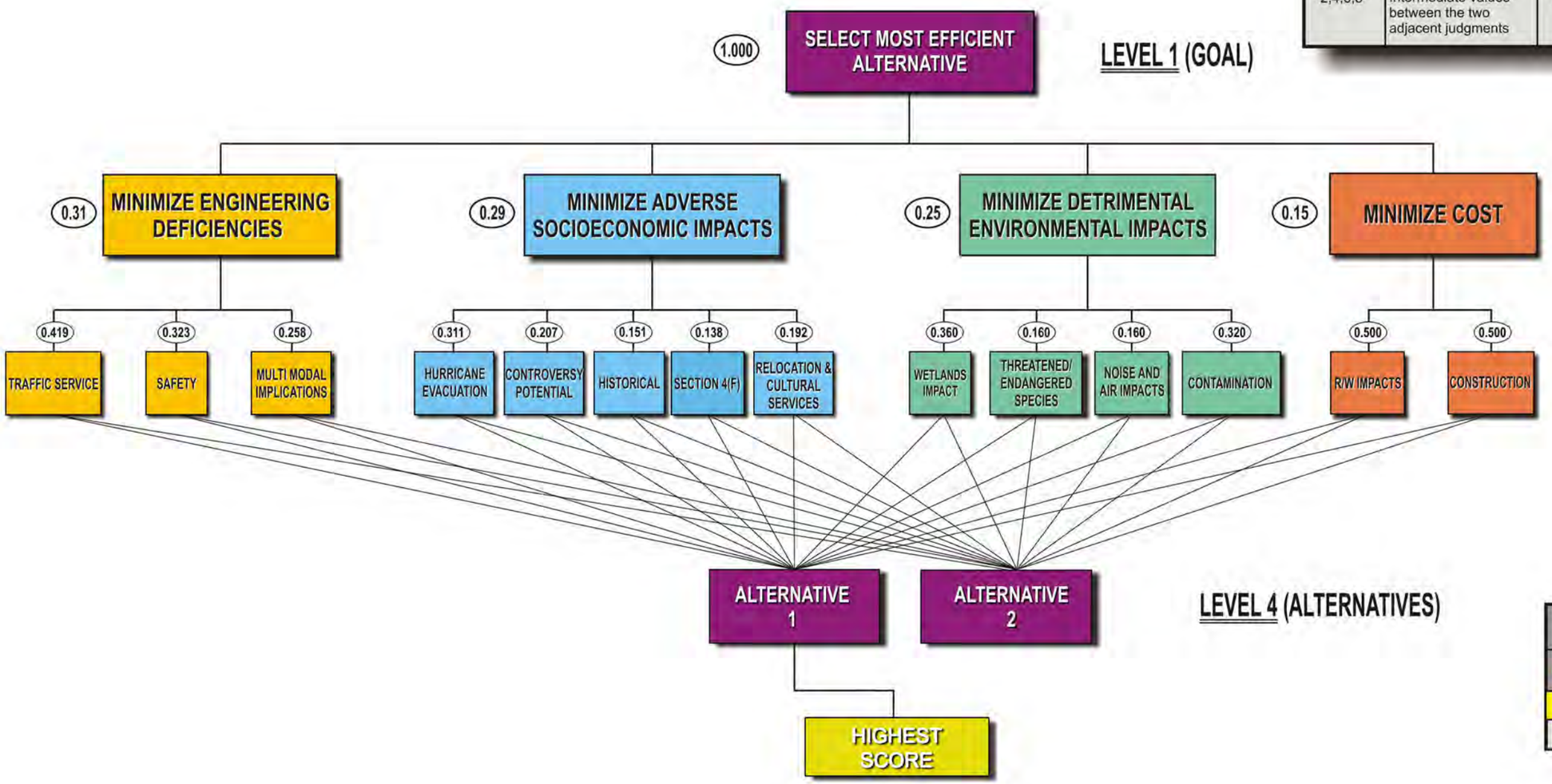
CRITERIA / ALTERNATIVES	ENGINEERING (31)			ENVIRONMENTAL (25)				SOCIO-ECONOMIC (29)					COST (15)		TOTAL SCORE
	TRAFFIC SERVICE (13)	SAFETY (10)	MULTIMODAL IMPLICATIONS (8)	WETLANDS IMPACT (9)	THREATENED/ ENDANGERED SPECIES (4)	NOISE & AIR IMPACTS (4)	CONTAMIN-ATION (8)	HURRICANE EVACUATION (9)	COMMUNITY AND CULTURAL RESOURCES (6)	HISTORICAL (4)	SECTION 4(F) (4)	RELOCATION (6)	RIGHT-OF-WAY (7.5)	CONSTRUCTION (7.5)	
NO BUILD	- - Does not improve the significant existing and projected delays associated with various segments of the existing corridor — 2.6	- - Does not address any safety concerns associated with the subject project — 2.0	- No new multimodal provisions are implemented — 3.2	o No impacts to wetlands, water quality, or floodplains — 5.4	o No relocation of state listed species or involvment with Critical Habitat for federal species — 2.4	o No new noise or air impacts — 2.4	o No involvment with contaminat ion; no testing or cleanup — 4.8	- - No additional improve-ment in terms of hurricane evacuation time is provided — 1.8	o No impacts — 3.6	o No new impacts to NRHP-listed site — 2.4	o No new impacts to 4(f) site — 2.4	+ No relocation required — 4.8	o No right-of-way cost — 4.5	o No construction cost — 4.5	**(46.8)**
1	++ Diversion of traffic away from the expected future congestion along US 90 and in downtown Milton will significantly reduce delays. Proximity to Milton will afford an alternate route to residences/ businesses — 13.0	+ Additional capacity and traffic diversion features will likely reduce the likelihood of crashes within the study area — 8.0	+ Provides additional pedestrian and bicycle features. Additional connectivity to the Blackwater Heritage Trail is a major positive feature — 6.4	- - Substantial wetland impacts (4.3 more acres than Alternative 2), crosses OFW and special flood zone — 1.8	- Will likely require relocation of state-listed gopher tortoises; crosses Critical Habitat for two federal species — 1.6	- 92 noise receptors (90 residences, one trail and one residentail facility) — 1.6	- Impacts to gas pumps at western terminus; traverses brownfield area with medium ranked sites — 3.2	+ Additional connectivity reduces delays during critical emergency evauaction times — 7.2	o Existing roadway (Oakland Dr) is being utilized where homes are located. Impacts will be associated with widening of this two lane roadway. Impacts were minimized by following the county road ROW. — 3.6	- Impacts anticipated to NRHP-listed site — 1.6	o Crosses 4(f) site, minimal impacts — 2.4	o Two possible mobile home relocations required at Winston Brown Rd & impact to one commercial site (gas station) at eastern terminus — 3.6	- Least right-of-way cost of build alternative — 3.0	- Least expensive "build" alternative (approximately $133,693,000) — 3.0	**(60.0)**
2	+ Generally similar to Alternative 1 but slightly less effective at diverting traffic away from US 90 and downtown Milton — 10.4	+ Additional capacity and traffic diversion features will likely reduce the likelihood of crashes within the study area — 8.0	+ Provides additional pedestrian and bicycle features. Additional connectivity to the Blackwater Heritage Trail is a major positive feature — 6.4	- Substantial wetland impacts, crosses OFW and special flood zone — 3.6	- Will likely require relocation of state-listed gopher tortoises; crosses Critical Habitat for two federal species — 1.6	- - 100 noise receptors (98 residences, one trail and one residential facility) — 0.8	o Traverses brownfield area with medium ranked sites — 4.8	++ Generally similar to Alternative 1 but provides a slightly more direct route — 9.0	- Proximity to a new residential neighboorhood at the junction with SR 87 N. New homes are currently being built. This neighborhood had few homes at the time this study began. Now there are 16 adjacent to the corridor and nearly 100 within the subdivision.. — 2.4	- Impacts anticipated to NRHP-listed site — 1.6	o Crosses 4(f) site, minimal impacts — 2.4	- 2 possible mobile home relocations required at Winston Brown Rd and at eastern terminus one residential relocation and impact to one additional mobile home — 2.4	- - Slightly higher cost than Alternative 1 — 1.5	- - Slightly higher cost than Alternative 1 (approximately $143,020,000) — 1.5	**(56.4)**

LEGEND

0.37 Assigned Priority (Weight)

SCALE OF RELATIVE IMPORTANCE

Intensity of Relative Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective.
3	Weak importance of one another	Experience and judgment slightly favor one activity over another.
5	Essential or strong	Experience and judgment strongly favor one activity over another.
7	Very strong importance	An activity is strongly favored and its dominance is demonstrated in practice.
9	Absolute importance	The evidence favoring one activity over another is of the highest possible order of affirmation.
2,4,6,8	Intermediate values between the two adjacent judgments	When compromise is needed.



SUMMARY

ALTERNATIVES	FINAL SCORE	RANK
1	0.520	1
2	0.480	2

3.3 Description of Alternative 1

Alternative 1 begins at the intersection of SR 87S and US 90 with a slight adjustment to the intersection alignment. Intersection improvements will also include bringing the SR 1 Historic Trail crossing up to standard and include (but not limited to) pavement and signage upgrades, pedestrian improvements and amenities, as well as landscaping and aesthetic enhancements. When Phase 2 is completed, The roadway at this location will be an urban typical matching SR 87S (Section A-A in Figure 3.4, **3.1.4 Construction Alternatives**) which includes four 12-foot travel lanes, and a 24-foot median, four-foot bike lanes, curb and gutter with a closed drainage system. It will also include a 12-foot wide multi-use trail on the west side of the road.

The roadway will transition to a bridge typical section as the connector approaches the Blackwater River floodplain (Section B-B in Figure 3.4). The bridging over the Blackwater River and its wetlands and floodway will consist of two parallel bridges approximately 25 feet apart. The bridges will each have two 12-foot travel lanes, 6-foot inside shoulders, and 10-foot outside shoulders. The western bridge (southbound) will also include a 12-foot multi-use trail. The bridges will extend over 5,571 feet crossing the Blackwater River, Pat Brown Road, and the BHST. Utilizing a series of ramps, the western bridge will connect the multi-use trail with the BHST below it. This connection meets other bike users and pedestrian's needs by providing a multi-use trail that will extend from US 90 and the Historic SR 1 Trail north to the Blackwater Historic State Trail. By providing a vital link between the Historic SR 1 Trail and the BHST, the proposed roadway system provides regional connectivity for pedestrians and recreational trail users.

North of the bridge over the BHST, the roadway transitions into a rural typical section (Section C-C in Figure 3.4). The rural section consists of four 12-foot travel lanes and 5-foot outside shoulders (bike lanes), and a 40-foot median. The section will have an open drainage system consisting of open swales adjacent to the road and within the median. There are no provisions for pedestrians, and no multiuse trail provided in this section. This typical section will extend from the BHST to the Clear Creek Bridge.

Much like the Blackwater River bridge, the Clear Creek bridge will consist of two parallel structures approximately 25 feet apart (Section D-D in Figure 3.4). The bridges will have four 12-foot travel lanes, 6-foot inside shoulders, and 10-foot outside shoulders. The southern (southbound) bridge will have a 22-foot shoulder to allow for a potential future extension of the multiuse trail.

West of the Clear Creek Bridge, the roadway continues as a rural typical section (Section C-C in Figure 3.4). As previously mentioned, the rural section consists of four 12-foot travel lanes and 5-foot outside shoulders (bike lanes), and a 40-foot median. The section will have an open drainage system consisting of open swales adjacent to the road and within the median. There are no provisions for pedestrians, and no multiuse trail provided in the roadway section. This typical section will extend from the Clear Creek Bridge to where it transitions to an urban section as the connector approaches SR 87N.

3.4 Description of Alternative 2

Alternative 2 will have the same beginning as Alternative 1. The two alignments are identical for approximately 4.7 miles.

After the Clear Creek Bridge, Alternative 2 will travel 0.85 miles west and then separate from the Alternative 1 alignment and curve to the north. This typical section will extend from the Clear Creek Bridge to where it transitions to an urban section as the connector approaches SR 87N.

Alternative 2 will intersect with SR 87N near Seasons Drive as an urban typical. This will include four 12-foot travel lanes, a 24-foot median, four-foot bike lanes, curb and gutter with a closed drainage system. The medians will be landscaped with trees, bushes and ground covers. Beyond SR 87N, Alternative 2 will become a rural typical section with two 12-foot travel lanes and 5-foot outside shoulders (bike lanes). The alignment will then connect to SR 89N approximately a half mile to the west, realigning the SR 87 and SR 89 intersection. See Figure 3.5 in **Section 3.1.4, Construction Alternatives**.

4. AFFECTED ENVIRONMENT

4.1 Population and Community Characteristics

4.1.1 Historic Perspective – City of Milton

Juan de la Rua was the first known settler near present-day Milton. He was the son of the Pensacola Overseer of Royal Works and in 1817 received an 800 arpent (approximately 672 acres) land grant from Spanish Governor Jose Kasot. The town of Milton was well established by 1840. It was located on a bluff above the Blackwater River and available to the deep-draft ships that navigated the short watercourse. Milton was incorporated in February 1844 by an act of the territorial government and in 1845 was made a Port of Entry. By 1848, there was direct transportation service to New Orleans by a steamer packet and the town had its own newspaper, the Milton Courier, which was owned by John Dorr. Milton and Santa Rosa County prospered throughout the 1850s. Although there was some farming activity, the amount of land under cultivation was quite limited. This was primarily because the population of the entire area depended upon the booming timber industry as the base of its economy. In the 1860s, Santa Rosa County had a population of 4,048 whites, 1,371 blacks (slaves) and 61 free people of color. Milton had a total population of 1,815 and was the state's seventh largest town.

The Civil War brought a sharp decline in economic development to Milton and all of Santa Rosa County. The Union Army's occupation of Ft. Pickens literally cut the region off from the rest of the nation because of its great dependence upon water transportation. When the Confederate Army withdrew from the area in March 1862, it destroyed anything that might have been useful to the Union forces, including the brick manufactories, sawmills, and the shipyards. Immediately following the war, the South underwent a period of "Reconstruction" to prepare the Confederate States for readmission to the Union. However, the decade between 1860 and 1870 resulted in a population loss of over 13% in Milton.

The Bagdad Land and Lumber Company (BLLC) operated the Florida and Alabama Railroad (F&A), a logging railroad that connected Bagdad to Milton, Red Rock, Munson, and Whitey, Alabama. The line was begun by Stearns & Culver Lumber and was completed by the BLLC in 1914. A 19-mile branch line lead from Milton into the pine forests of Alabama where it serviced the timber and turpentine camps. After the BLLC mill closed in 1939, the F&A was abandoned. Milton's citizens were so dependent upon the paternalism of the mill owners that in 1905 the town voted against a bond issue to provide electric lights, a waterworks, and a sewage system because Stearns and Culver Lumber Company (and later the Bagdad Lumber Company) provided electrical power to Milton. However, in 1913 a labor dispute with the mill caused the power supply to be discontinued. As a result, Milton did not have these types of services until the 1920s and 1930s.

The first Courthouse in Milton, located on Berryhill Road on the site of the current Berryhill School Administration building, served as the Town Hall. Devastating fires

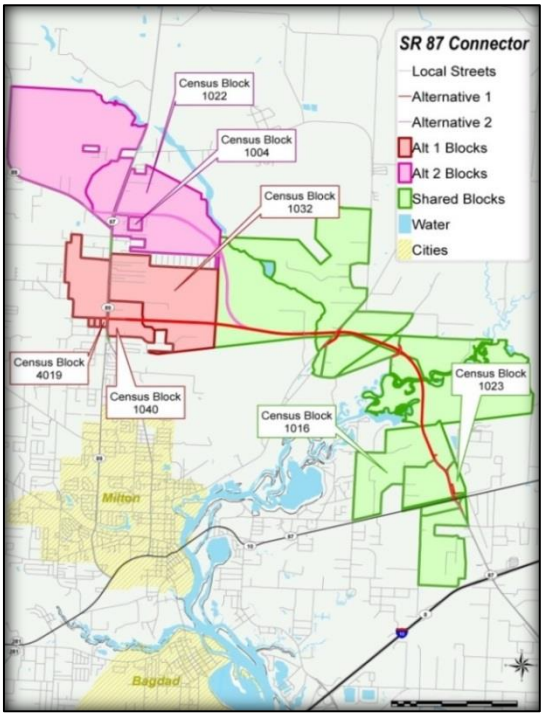
struck Milton in 1885 and 1892. Each largely destroyed the commercial sections of town. The worst fire of all, in 1909, razed almost every building within two blocks of the river, including the Town Hall. One of the few buildings remaining was the old courthouse. Downtown Milton today reflects the aggressive rebuilding effort that took place in the years following after this fire.

Whiting Field, located north of the project area, was established in 1943. Whiting Field was one of three auxiliary air fields developed by the Navy at the beginning of World War (WW) II to allow accelerated training for flyers. Federal road building, airfield construction, and the production planes and ships for the wartime defense effort brought unparalleled numbers into Florida and the project area during the postwar years. According to the USCB the state's population grew over 40% during the 1940s. The Santa Rosa County population has continued to expand, increasing almost 30% from 2000 to 2010, with an estimated population of 151,372.

Downtown Milton has been named one of the Florida Trust for Historic Preservation's Eleven Most Endangered Sites three years in a row (2010, 2011 and 2012) because of devastation from a 2009 fire in the heart of the historic district, as well as transportation expansion pressures that could destroy the remaining core of the downtown and surrounding neighborhoods.

4.1.2 Demographics

Santa Rosa County covers 2,010 square miles in the Panhandle of Florida. The population was estimated to be 158,512 in 2012 with a 4.7% increase from 2010, nearly twice the state's growth rate.



Race/Ethnicity: Census information may be obtained in a variety of formats. The Census Block (see map) analysis is the most detailed information available. Due to this fact, the block data was reviewed for race and ethnicity percentages. According to the Census Data obtained in 2013, Alternative 1 and 2 intersect 36 Census Blocks. The average race percentages for these blocks are as follows:

Table 4.1	RACE – Affected Census Blocks						ETHNICITY	
	White	***Black***	***Asian***	***Native***	***One Race, Other***	***Two or More Races***	***Hispanic***	***Non-Hispanic***
Total #	2,600	261	35	36	15	66	122	2,891
Percentage	82.90%	8.40%	1.10%	1.10%	0.50%	2.10%	3.90%	96.10%

Based on 2010 Census Data

The average percentages for Santa Rosa County are:

Table 4.2	RACE – Santa Rosa County						ETHNICITY	
	White	***Black***	***Asian***	***Native***	***One Race, Other***	***Two or More Races***	***Hispanic***	***Non-Hispanic***
Total #	132,920	8,205	2,759	1,523	1,463	4,502	6,507	144,865
Percentage	87.81%	5.42%	1.82%	1.01%	0.97%	2.97%	4.30%	95.70%

Based on 2010 Census Data

The average percentages for Florida are:

Table 4.3	RACE - Florida						ETHNICITY	
	White	***Black***	***Asian***	***Native***	***One Race, Other***	***Two or More Races***	***Hispanic***	***Non-Hispanic***
Total #	14,109,162	2,999,862	454,821	83,744	681,144	472,577	4,223,806	14,577,504
Percentage	75.04%	15.96%	2.42%	0.45%	3.62%	2.51%	22.47%	77.53%

Based on 2010 Census Data

There are seven out of the 36 impacted census blocks (See map) that include minority percentages greater than the county average, and two that include minority percentages greater than the state average. The following are the population numbers from these census blocks:

Table 4.4	RACE – Selected Blocks						ETHNICITY	
Census Block	***White***	***Black***	***Asian***	***Native***	***One Race, Other***	***Two or More Races***	***Hispanic***	***Non-Hispanic***
1004	426	42	7	4	6	17	36	466
1016	376	79	6	0	0	0	14	447
1022	73	16	2	0	1	2	12	82
1023	35	25	0	0	0	0	0	60
1032	573	45	11	16	1	23	19	650
1040	76	9	1	2	0	8	4	92
4019	10	0	0	0	5	0	5	10

Based on 2010 Census Data

In all of the above blocks, existing road right-of-way was utilized where possible to minimize any residential impacts, though impacts associated with roadway widening will apply. More information on the impacts in these areas is found in Section **5.1, Environmental Consequences.**

Limited English: Limited English for 'Those Five Years and Older': The Limited English Proficiency (LEP) population is at the Block Group level. Out of a total population of 11,692 in the six potentially impacted blocks, 18 persons speak English "Not Well" and 0 speak English "Not at All". As a result, over 99% speak English at least "Well". Given the low percentage of LEP, language services for this project are not required. However, FDOT will provide interpretation services, free of charge, with reasonable notice.

Age: The Median Age and percentages of residents over the age of 65 in the 6 potentially impacted Census Block Groups do not reflect a large difference from the averages in Florida and in the US. Census Block 010502-4 had the highest median age and highest percentage over Age 65. It should be noted that the proposed roadway improvements in this census block geographic area are limited to intersection improvements on SR 87N only.

Table 4.5	Age By Census Block			
Census Block Group	Median Age (years)	% Age 65-74	% Age 75-84	% Over 85
010400-2	40.6	10.09	4.03	0.58
010502-1	32.3	6.49	2.82	0.8
010502-2	41.4	10.43	3.34	0.75
010502-4	47.8	13.01	7.24	1.27
010808-1	32.6	2.55	0.7	0.22
010809-2	42.0	10.58	3.06	1.12

Based on 2010 Census Data

Table 4.6	Age in State and US			
Loacation	Median Age (years)	% Age 65-74	% Age 75-84	% Over 85
Florida	40.7	9.19%	5.84%	2.31%
US	37.2	7.03%	4.23%	1.78%

Based on 2010 Census Data

Mobility: All Census Block Groups had vehicles available per household unit higher than both the Florida and US average. The Florida average of No Vehicles Available is 6.46% and the US average is 8.85%.

Table 4.7	Mobility by Household					
Census Block Group	No Vehicle Available	One Vehicle Available	Two Vehicles Available	Three Vehicles Available	Four Vehicles Available	Five or more Vehicles Available
010400-2	23 (5.5%)	125	153	96	8	13
010502-1	19 (2.8%)	264	318	52	18	0
010502-2	0 (0%)	99	267	209	26	10
010502-4	32 (3.7%)	180	463	104	53	40
010808-1	0 (0%)	47	277	105	34	0
010809-2	4 (1%)	135	423	93	71	0

Mobility by Housing Unit. Based on 2010 Census Data

Other Modes: As expected, due to the rural nature of much of the location of the two alternatives, the transportation of choice for those that work outside the home is by car, truck, motorcycle, etc. As noted in several areas throughout the Environmental Impact Statement (EIS), this project will improve mobility by offering bicycle/pedestrian connectivity between existing bicycle/pedestrian corridors.

In Census Block Group 010502-4, there were 33 persons (3.2%) that utilized public transportation and 13 (1.3%) that walked to work. It should be noted that the proposed roadway improvements in this census block geographic area are limited to intersection improvements on SR 87N only. These improvements will not adversely affect the services offered by the existing public transportation service providers in the area. In Census Block Group 010400-2, 51 (7.9%) out of 643 persons said they walked to work. Block Group 0104000-2 includes the Whiting Field NAS, and the walking community is likely within the base boundaries and will not be affected by this project.

4.1.3 Existing Community Facilities

The following Community facilities are located within the Project's Study Area:

Schools and Day Care Centers – Learning Academy, King Middle School, Professional Development Center, Radar Schools of Santa Rosa, TR Jackson Elementary School, WH Rhodes Elementary School, East Milton Elementary School, Milton High School and Santa Rosa Community School.

Parks – McCallister Park, Locklin Field, Bayview Heights 1, 3, & 4, Milton Courts Park 1, 2, and Woodland Lake Heights Public Park.

Places of Worship – Greater Bethlehem AME, New Beginnings Church of Jesus Christ, Victory Life, First Baptist of Milton, Santa Rosa Baptist Association, New Life Baptist, Work Alive Christian, Shepherd's House Ministries, World of Outreach Christian Center, Trinity Church, Deliverance Tabernacle, Mount Pilgrim African, Isaiah Chapel AME Zion, St. Rose of Lima Catholic Church, Westminster Presbyterian, Bethlehem Primitive Baptist, Old Fashioned Light House Holiness, United Methodist, Faith Chapel Assembly, First Presbyterian, Ferris Hill Baptist, Pleasant Hill Missionary, East Milton Assembly of God, Evangel Christian, Mount Zion Pentecostal Peace and Love Holiness, Mount Zion Primitive Baptist, Reorganized Church of Jesus Christ of Latter Day Saints, First Assembly of God, Bible Way Baptist, Episcopal, Faith Baptist, St. John Divine Missionary, Bay Area Vineyard, Work Alive Christian, Olive Baptist, and Margaret Street Church of Christ.

Public Facilities – FIL-AM Community Center, Santa Rosa Lodge, School Board Offices, Cedar Pines camp grounds, Chamber of Commerce, James Street Playground, BHST Office, Veterans Plaza, Milton Community Center, Russell Harbor Boat Landing, Milton Museum, Marquis Boat Ramp, and the Blackwater River Water Management Area.

Hospitals – Gulf Medical, West Florida Community Health Center, Watson Alternative Health, Santa Rosa Health and Rehabilitation, Pediatric Therapy Center, and Santa Rosa Community Clinic.

Government Facilities – County Clerk's Office, County Courthouse, Department of Corrections, Department of Juvenile Justice, City of Milton Utilities, Department of Agriculture, State Representative Greg Evers Office, Milton Housing Authority, Santa Rosa County Health Department, Milton City Hall, Sheriff's Department, Santa Rosa County Department of Health – Environmental Health Office, Post Office, Probate Office, FL Child Protection, Public Defenders Office, and East Milton Water System.

Libraries – Milton Branch Library

Mass Transit – None

Communication Facilities – 12 cell towers, Gulf Power Sub Station, and AT&T.

Fire Stations – Skyline Fire Rescue 1, 2, & 4, Milton Fire Department, East Milton Volunteer Fire Department, and Whiting Field Fire Department.

Air – Peter Prince Air Field, Whiting Field NAS.

Military – Whiting Field NAS.

Cemetery – Morton Cemetery, Serenity Gardens.

4.2 Economic Conditions

Residential economics, as reported by the USCB, stated that in 2011, home ownership was at 76.3%, median household income from 2007-2011 was $55,913, and the persons living below poverty level was at 10.8%, all better than the Florida state averages.

However, development along the US 90 corridor east of Milton has suffered both from the economy downturn and from the lack of capacity on US 90 through downtown Milton where SR 87 must share its alignment. A field review of the study area in the vicinity of US 90/SR 87 showed abandoned industrial buildings, as well as abandoned subdivision areas where lots had been started and roadways and utilities were available. Conversely, the SR 87N corridor area and US 90 area west of Milton (including Pace) shows much development and growth. The project team has reviewed the Commercial and Residential permits, as well as the building inspections for Santa Rosa County and though there has been a drop in permitting in the entire county, it has been a dramatic drop in the East Milton area. This area saw much commercial growth in the early 1990s, but this growth has fallen sharply. Overall, commercial permits west of Milton from 1991-2011 totaled over 1,000 and permits South of Milton totaled nearly 2,500. Conversely, permits east of

Milton totaled only 189 for that time period. Likewise, residential permitting has fallen for the East Milton area compared to the western part of the county, with approximately 3,500 permits issued in East Milton and 9,500 permits issued west of Milton. After a review of the building inspections (all types), the northern part of the county (north of Yellow River) has been consistently higher than the southern part of the county since 2006 illustrating growth in the northern areas. According to the Census Data obtained in 2013, Alternatives 1 and 2 intersect 5 Census Block Groups. Following is the Median Household Income for these Block Groups:

Table 4.8

Census Block Group	Median Household Income (12 months)
010400-2	$59,063
010502-1	$45,203
010502-2	$58,828
010502-4	$59,250
010808-1	$48,237
010809-2	$41,875

Based on 2010 Census Data

DOT and FHWA utilize the Department of Health and Human Services poverty guidelines, updated annually. The 2013 Poverty Guidelines are as follows:

Table 4.9

Persons in family/household	Poverty guideline
For families/households with more than 8 persons, add $4,020 for each additional person.	
1	$11,490
2	$15,510
3	$19,530
4	$23,550
5	$27,570
6	$31,590
7	$35,610
8	$39,630

According to the Census Block information, there is an average of less than 3 persons per household (after removing the blocks with no population). As a result, none of the Block Groups reflect a significant low income population. There are no likely disproportional impacts to citizens below the poverty line of $19,530.

Of particular note, the elimination of the southern alternatives due to the inability to traverse protected lands also resulted in the avoidance of Census areas within Santa Rosa County that had the highest minority percentages, and included some of the lowest income per household amounts as well.

4.3 Cultural Resources

The ETAT review for Cultural Resources included a rating of Moderate for Alternate 1 and 2 for Historic and Archeological Sites due to the potential impacts to SR 1, as well as potentially historic structures within 500 feet of the proposed alignments. It was noted the northern alternatives 1-3 would likely have fewer impacts to historic resources than the southern corridors 4-6, which coincides with the data analysis the project team completed. Based on the Cultural Resources Probability Assessment (CRPA) and field surveys, no archaeological resources were found within the study area.

The historical/architectural survey identified nine historic resources including one previously recorded National Register of Historic Places (NRHP) as a listed historic road (SR 1 [8SR1313]; listed 1994). Old State Road 1/Old Spanish Trail is a 6 mile brick road that runs parallel to US 90 from east of Ward Basin Road to east of SA Jones Road. It is significant as the first state road within the Florida Panhandle and maintains its integrity as a historic brick road.

Additionally, two unrecorded historic railroad alignments are located within the Area of Potential Effect (APE). The BHST was the original alignment for the Bagdad Lumber Company railroad between Bagdad and Munson, which later became the Florida Alabama Railroad. The CSX railroad, running along the north side of US 90, was initially chartered by the Louisville & Nashville Railroad in 1881 as the Pensacola and Atlantic Railroad. With the exception of State Road 1; however, none of the previously or newly recorded historic resources is considered eligible for listing in the NRHP due to the compromised integrity and the lack of significant historical association.

Downtown Milton has been named one of the Florida Trust for Historic Preservation's Eleven Most Endangered Sites three years in a row (2010, 2011 and 2012). **Figure 4.1** on page 4.10 provides a summary of the environmental features in the area. This area is not impacted by either Alternative 1 or 2.

The ETAT reviews included ratings of Moderate for Alternative 1 and Substantial for Alternative 2 for Recreational areas; and a rating of Moderate for both alternatives for Section 4(f) impacts. This was primarily due to potential impacts to the BHST, as well as the previously mentioned historic SR 1. The BHST is an 8.02 mile recreational trail and conservation land managed by the Florida Department of Environmental Protection (FDEP) Office of Greenways and Trails. The trail is available for biking, running, walking, in-line skating, rollerblading, horseback riding, and bird watching. Recreational resources on the BHST that are listed on the trail map and included in more detail in 4.3.1 Section 4(f) include paved multi-use trail, a visitor center, and three trailheads. The trailheads feature parking, picnic tables, gazebos, restrooms and equestrians facilities.

In addition, Alternative 2 traverses lands that are planned for purchase as part of the Clear Creek/Whiting Field Florida Forever Board of Trustees Project. It should be noted that after coordination with the county and a review of the planned purchase properties, Alternative 2 was updated to be located on the extreme western border of this property and/or within the county owned parcels.

4.3.1 Section 4(f)

There are two Section 4(f) resources in the area of the project alternatives. The BHST and the previously described (Section 4.3) Old State Road (SR) 1/Old Spanish Trail (see **Figure 4.1** on page 4.10).

The BHST is a multi-use paved recreational trail facility and a conservation area owned by the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. The management responsibility is conveyed to the FDEP Office of Greenways and Trails, Division of Recreation and Parks, in the form of a lease. It is officially part of Florida's Statewide System of Greenways and Trails.

The Statement of Significance prepared by Mr. Matthew Klein from FDEP describes the BHST as a predominantly rural trail that is available for biking, running, walking, in-line skating, rollerblading, horseback riding and bird watching. Recreational resources on the BHST that are listed on the trail map include the 8.02 mile paved multi-use trail, a visitor center, and three trailheads: the Milton Trailhead, the Munson Highway/Equestrian Trailhead, and the Whiting Field Naval Air Station Trailhead (Whiting Field Trailhead). The Visitor Center located at 5533 Alabama Street (approximately one mile north of the Milton Trailhead), offers parking, restrooms, picnic tables, barbeque grills, an amphitheater, a playground for children and a meeting room. The beginning of the Milton Trailhead is located within the town of Milton, on the northwest corner of the State Road 87N/US Highway 90 intersection. The Milton Trailhead features picnic tables and a gazebo, restrooms, a water fountain and a bicycle rack. A nearby shop sells, rents and repairs bicycles. The Munson Highway Trailhead, located at the intersection of the trail and Munson Highway, offers space for parking, including spaces for horse trailers and oversized vehicles. The equestrian trail runs parallel to the asphalt trail with shared bridges. This trailhead includes a parking area and a covered picnic table.

In addition, about 1/4 mile north from the Munson Highway Trailhead, there is a well-maintained, accessible, portable toilet that complies with the Americans with Disabilities Act (ADA). Two waterless vaulted restrooms were installed in 2010 (one near the six-mile point and the second one near the eight-mile trail point). No existing or planned facilities are located or will be installed within the portion of the trail that crosses the project corridor *(See Section 5.3.3 for Section 4(f) Impacts).*

N

1" = 5,000'

SPRINGHILL RD

Some lands have been recently purchased as part of the Clear Creek/Whiting Field Florida Forever Project

Blackwater River

Potential impacts to critical salamander habitat needs to be avoided. Formal consultation with USFWS is required

Florida Historic State Road 1

SR 1 was the first state road in the Florida panhandle and is in use today as a multi-use trail

87S

BEGIN STUDY AREA

HICKORY HAMMOCK RD

MUNSON HWY

EASTGATE RD

90

INTERSTATE 10

Clear Creek

Blackwater Heritage State Trail

Blackwater River Water Management Area

Whiting Field Naval Air Station

The Blackwater Heritage State Trail is a popular leisure trail in the area

END STUDY AREA

87N

GARCON POINT RD

N STEWART ST

87N

City of Milton

DOGWOOD DR

89

87N

89

GALT CITY RD

Clear Creek

Extensive coordination with FDEP will be required due to presence of planned Florida Forever Lands

A significant amount of gopher tortoise burrows have been spotted. Potential Impacts to upland/sandhill habitats will need to be minimized and/or mitigated

WILLARD NORRIS RD

BERRYHILL RD

HAMILTON BRIDGE RD

AVALON BLVD

90

LEGEND

- Corridor Study Area
- Historic Trail
- City Boundary
- Existing SR 87 Route

Conservation Areas

- Florida Managed Areas
- Planned Florida Forever Sites

Environmental Features

- Outstanding Florida Waters
- Locations of gopher tortoises observations
- Gulf Sturgeon Critical Habitat
- Reticulated Flatwoods Salamander Critical Habitat

4.4 Utilities and Railroads

To determine the extent of utility adjustments required by project improvements, local utility companies that may have facilities within the project limits were contacted and requested to submit the location of their existing and planned facilities. **Table 4.1** presents a list of utilities within the project vicinity and their pertinent contact information. As the Study progresses, continued coordination will take place with all pertinent utility companies. It should also be noted that East Milton and Santa Rosa County are currently planning to build the East Milton Wastewater Treatment Plant (WWTP) within the project area northwest of the Santa Rosa Correctional Institute. Proposed alternatives were designed in order to avoid impacts to the site of the proposed WWTP. The County has proposed sanitary sewer lines leading to the WWTP from the north, parallel to the east side of the power easement crossing Blackwater River.

Table 4.10 Existing Utilities

Utility Owner	Representative Contact Information	Type/Size of Utility and Location
AT&T Florida	Nancy Spence 707.918.5424	Telephone main lines
AT&T Communications	Allan Rudolph 850.436.1488	Telephone – Fiber Optic and Copper Aerial and Buried (50% / 50%) On most roadways & serves Whiting Field
City of Milton	Jesse Cornell 850.983.5428	Water: Throughout City of Milton, 4" and 6" mains along Munson Highway Sanitary Sewer: Sewer system in City and up Munson Highway to Eastgate Rd. Natural Gas: In City Limits
CSX Railroad	Hal Gibson 904.359.1048	Railroad along north side of US 90
East Milton Water System, Inc.	Uwe K. Rogers 850.623.8750	Water mains east of Bridge on US 90, and at intersection of SR 87S and US 90
Gulf Power	Chad Swails (FDOT Projects) 850.429.2446	Power poles and overhead electric throughout Milton Area Transmission Lines run north from US 90 and SR 87S intersection and east-west across Blackwater River
Level 3 Communications	Relocations Dept. 877.366.8344	Buried Telephone
MCI	Investigations 972.729.6016	Buried Telephone and Fiber Optics
Mediacom	Eddie Arnold 850.934.2560	Cable TV, buried & overhead, located throughout residential areas
Okaloosa Gas	Essa Rhebi 850.729.4870	8" and 12" Transmission Lines run east-west on Willard Norris Rd./Magnolia Street on easement under Blackwater River AND 4" Gas Transmission feeding Whiting Field from SR 87
Point Baker Water System, Inc.	Tony Mathis 850.623.4545	Water lines north of Milton – but does not serve Whiting Field
Qwest	Dwain Alverson 850.232.0072	Buried Fiber Optics in 4 orange ducts parallel US 90 on north side of Railroad
Southern Light, LLC	Andru Bramblett 251.662.1170	Fiber Optic mostly aerial (65%), Customers: Department of Defense, and other large communication needs. Not in residential areas
Sprint Nextel	Mark Caldwell 407.838.5602	Fiber Optic, serving residential and commercial properties in Milton

4.5 Comprehensive Planning

A review of the Comprehensive plan for Santa Rosa County shows concern about the congestion of the US 90/SR 87 corridor. Objective 4.1.E of the Transportation Element states the County will give the highest priority to transportation projects that will relieve existing traffic congestion. Part 2 of this Objective specifically mentions US 90 between Canal Street and SR 87 as an area the County "shall continue to request, recommend, and support immediate roadway improvements in order to relieve the congestion". Section 2.2.7 *Planning Consistency* includes more information on the regional planning goals, agenda, and budget.

In addition, the County's Economic Development Element includes the fostering of small business development by ensuring adequate commercial or industrial zone sites are available. This coincides with the Future Land Use maps for the southern portion of the study alternatives. There is a proposed increase in industrial parcels reflected in the maps near the SR 87S and US 90 intersection. Likewise, the updated 2011 Future Transportation Maps (Map 4-4) include the SR 87 Connector, and the 2014 Capital Improvements Element in the county's comprehensive plan includes this project.

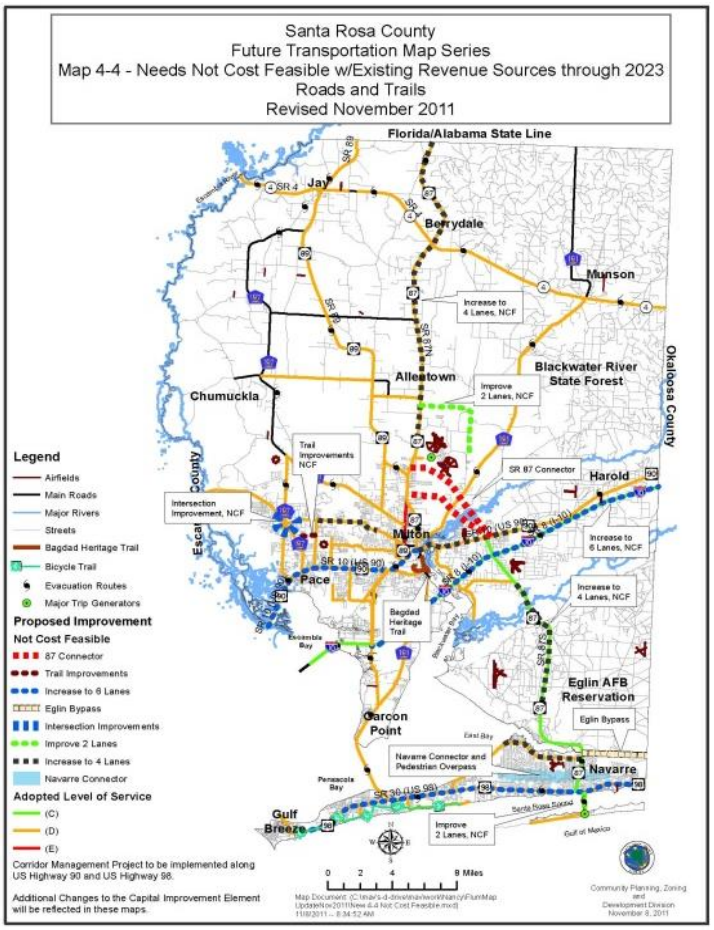


Figure 4.2: Future Transportation Map 4-4

Also, Santa Rosa County has included protection measures around Whiting Field in their Comprehensive Plan. Policy 3.1.B.5 states that the county will continue to purchase agricultural and conservation easements for the purposes of preserving and limiting development of farmland adjacent to military facilities. As a result, the northern corridors 1-3 were coordinated with the county, adjustments were made to the alignments to follow parcel lines and move west of Whiting Field. Also, the access management for the resulting alternatives was determined to include a restrictive median with full median openings spaced at ½ mile, directional openings spaced at ¼ mile and limited driveway/side street connections (Access Class 3). These restrictions will assist in the reduction of potential urban sprawl in the location of the conservation areas adjacent to Whiting Field.

4.6 Land Use

The ETAT review included ratings of Minimal for both Alternatives 1 and 2. However, an initial Moderate rating was given by the Florida Department of Community of Affairs. This was due to concerns that the City of Milton and Santa Rosa County did not have this project by name on future transportation maps or Capital Improvement Schedules. In addition, there was a concern about the coordination required for the conservation of lands around the military base, the Military Airport Zones and the opportunity for urban sprawl.

The representative from Whiting Field NAS assigned a Minimal rating, though he requested that the existing zoning regulations and the approved Joint Land Use Study information be incorporated into the study analysis. The project team coordinated extensively with the City and County on their documents, as well as met with the military to ensure the alignment locations met their needs. Additionally, the Navy liaison identified concerns over potential increases from bird strikes to aircraft and recommended mowing strategies and limited retention of stormwater ponds to reduce impacts. These items can be considered and may be implemented as part of routine maintenance strategies. As a result of these meetings and coordination efforts, adjustments to alternative location, pond type, document updates, etc. were completed.

The Study area for the SR 87 Connector consists primarily of agriculture, industrial and single family residential lands. Among the parcels impacted by the two alignments, the majority are agriculture/silviculture and industrial according to the Santa Rosa County Land Use information obtained from their GIS department. There are some Single Family Residential areas in the vicinity where the alternatives intersect SR 87N, as well as in the area near the proposed Munson Road intersection.

The County planning staff has expressed concern that if an effective alternative is not found to complement the existing roadways; sprawl will extend even further beyond the study area; congestion will worsen on US 90/SR 87 and job growth in particular in the East Milton industrial area will halt due to the limited available capacity of US 90/SR 87 through Milton.

Growth trends and projected land use from the County's Future Land Use Maps illustrate an expectation for industrial uses to increase especially at the southeastern end of the study area where both Alternatives 1 and 2 originate. **Figures 4.3** and **4.4** illustrate the county's current and future land use designations.

There are two platted subdivisions and one condominium in the public involvement buffer area for Alternatives 1 and 2. Alternative 2 impacts access for one platted subdivision at the intersection with SR 87N. No homes/condominiums are expected to be relocated in this area.

Figure 4.3: Existing Land Use Santa Rosa County

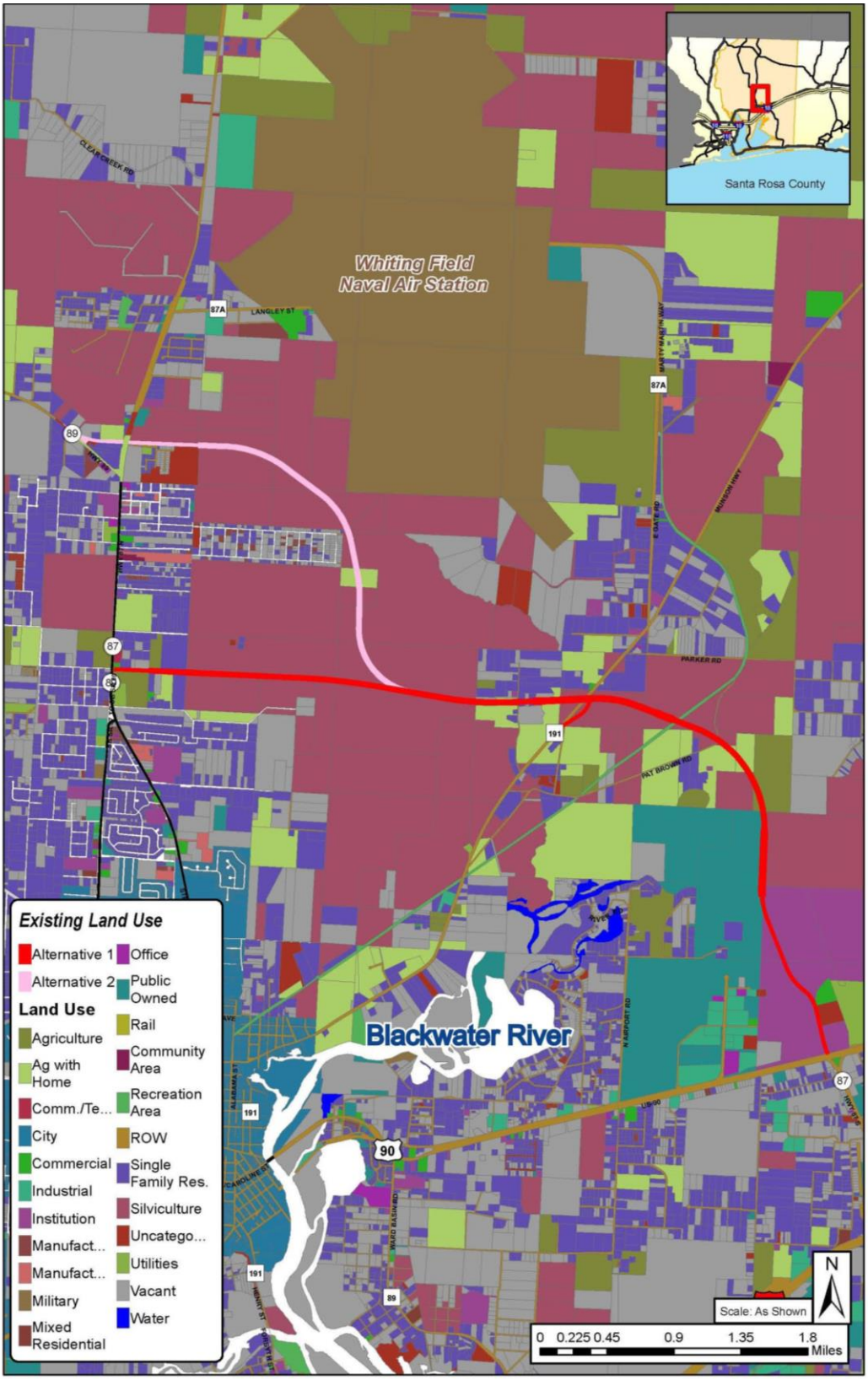
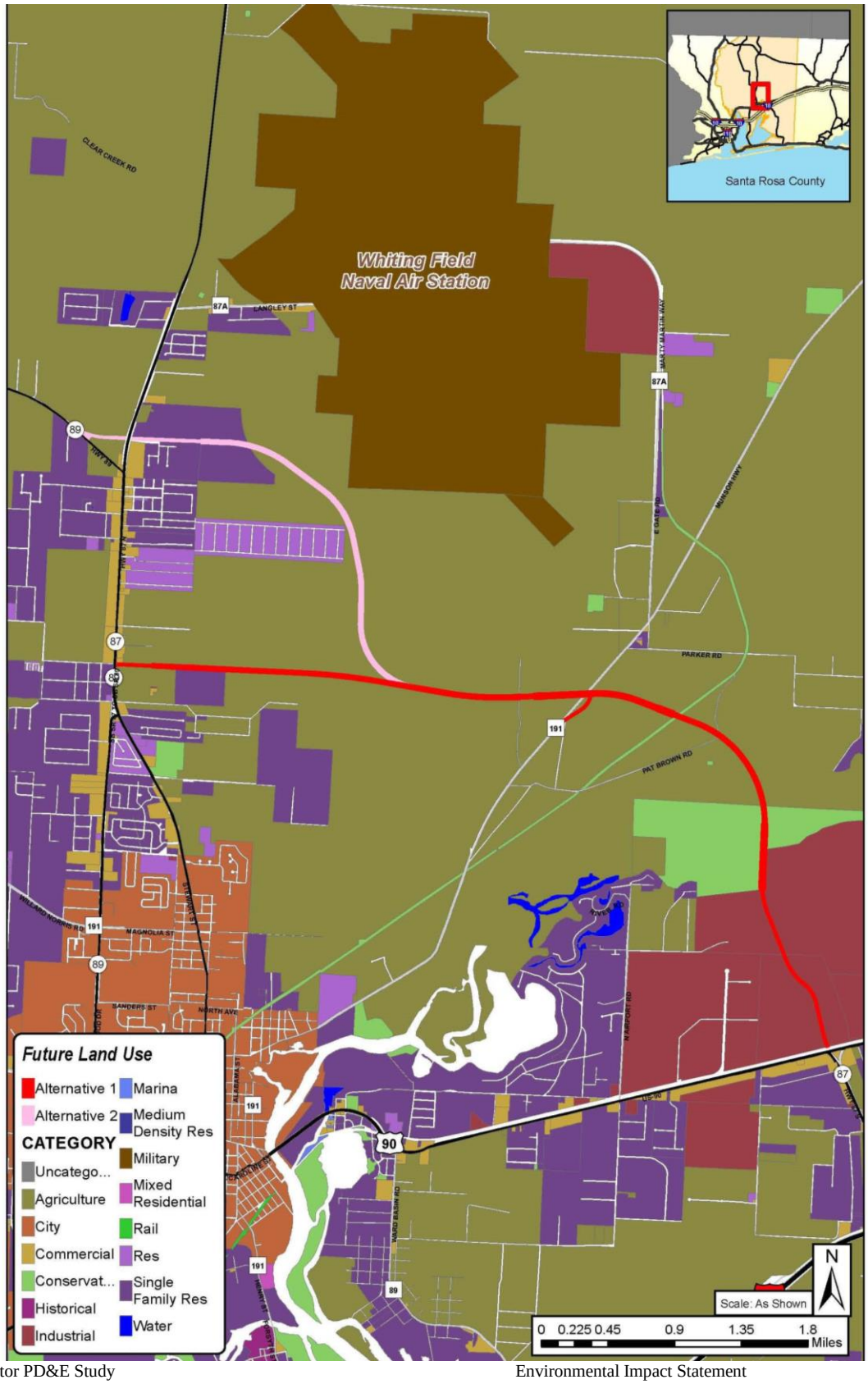


Figure 4.4: Future Land Use Santa Rosa County



4.7 Water Resources

The ETAT review included a rating of Substantial from the US EPA and NWFWMD and Moderate from the FL DEP with regard to Water Quality and Quantity for both Alternatives 1 and 2. This was primarily due to the potential for impacts to surface water quality as a result of stormwater runoff into nearby surface water bodies. The existing drainage within the project study area primarily functions by overland sheet flow which discharges into wetlands adjacent to Clear Creek and Blackwater River. No existing treatment is provided nor required prior to discharge, except at the developments near East Milton Road and Season Drive. The majority of the land within the study area is used for agricultural purposes. There are eight existing drainage basins along each alternative. In general, the existing basins are in timberland or residential subdivisions and runoff sheet flows to surrounding wetlands. The stormwater runoff from this project outfalls into the Blackwater River, the Pensacola Bay and ultimately into the Gulf of Mexico. The existing water quality is of high-quality and primarily unaffected by manmade features since most of the study area is undeveloped land or agricultural land. The north and south ends of the study area (existing state roads) provide treatment of storm water runoff for water quality in retention ponds.

The hydrology within the study area varies greatly due to land use and ground elevations. The Blackwater River is 57 miles in length and collects runoff from southern Alabama and northern Santa Rosa County. The river is attributed to a wide floodplain and regulatory floodway at the proposed roadway and bridge crossing. Clear Creek is a tributary to the Blackwater River and has a floodplain associated with the creek; however, Clear Creek is not a regulatory floodway.

The project has significant changes in elevation near the Blackwater River and “rolling hills” in the agricultural areas in the northern portion of the project. The majority of the study area has an elevation of 70 feet or greater and is outside flood zones associated with risk from the 500 year event.

GIS analysis indicates five wells within a 500 foot buffered polygon. The western end of the polygon lies in an area “vulnerable” to contamination of the Floridian Aquifer and the majority of the polygon shows as “more vulnerable” to contamination of the surficial aquifer, according to the Florida Aquifer Vulnerability Assessment. Existing water table elevations vary from 0 feet (at surface) to greater than 6 feet, which is consistent with Geotechnical investigations completed for potential pond sites.

Blackwater River drains to Blackwater Bay and is part of the Pensacola Bay watershed; these are Surface Water Improvement and Management (SWIM) priority waters of the NWFWMD. The Blackwater River is listed as an Outstanding Florida Water (OFW). OFWs are provided the highest level of protection under the 62-302.700, F.A.C (Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters). Degradation of water quality in an OFW is prohibited except under certain circumstances. Pollutant discharges must not lower existing ambient water quality.

4.8 Floodplains

During the ETAT review, Floodplain potential impacts received a rating of Substantial from the NWFWMD and a rating of Moderate from the US EPA due primarily to the floodplain areas around Blackwater River and Clear Creek, and the storm surge zones within the alignment areas. Flood Insurance Rate Maps (FIRMs), prepared by the Federal Emergency Management Agency (FEMA), were utilized to determine limits of floodplains, determine base flood elevations, and investigate any special conditions required along the proposed alternatives. The majority of the project alternatives are outside of the 100 year flood zone (Zone X), except at the previously mentioned two locations; 1) surrounding the Blackwater River and 2) surrounding Clear Creek. The Blackwater River is a "Floodway Area" in Zone AE and "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Change Flood" in Zone AE. Clear Creek is in "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Change Flood" in Zone AE and has a base flow elevation of 18 feet. Clear Creek is a tributary to Blackwater River; connecting downstream of the proposed Blackwater River Bridge. Additional information is provided in *Section 5.4.8*. A location map of the floodplain areas is located in the **Appendix F**.

Karen Thornhill, Santa Rosa County's Floodplain Manager, stated that the Gulf Power Easement along Pat Brown Road (location of both Alternatives) repeatedly floods to the 100 year flood zone line. According to the National Oceanic and Atmospheric Administration's (NOAA) Storm Surge Interactive Risk Maps, there is risk for storm surge resulting from hurricanes within the project limits. A hurricane of any category has the potential to produce storm surge within the floodplain areas of this project.

4.9 Vegetation

In general, the existing wetland hydrology supports the natural communities and no significant alternation in hydroperiods from historic patterns exists. Many of the wetlands in the project area are associated with the Blackwater River Water Management Area or the Clear Creek floodplain area (see **Figure 4.1**).

The dominant existing land use traversed by both viable alternatives was Wetlands Forested Mix, Hardwood Coniferous-Mixed, Coniferous Plantations, and Rangeland. The wetland classifications in the area according to Florida Natural Areas Inventory (FNAI) include seepage slope/wet prairie, basin swamp, dome swamp and bottomland forest. Wetland classifications based on Florida Land Use, Cover and Forms Classification System (FLUCCS) include streams and waterways, wetland hardwood forests, wetland forested mixed, intermittent ponds and wetland shrub. Wetlands in the project area are medium/high quality wetlands. Anomalies do exist where power lines have been constructed through wetlands, where silvicultural activities are conducted or wetlands are adjacent to development.

The majority of the seepage slope/wet prairie within the project area is fire suppressed and dominated by black titi (Cliftonia monophylla), white titi (Cyrilla racemiflora), and

galberry (Ilex glabra). In areas that have been mowed, such as the power line easements, greater plant diversity was observed.

The basin swamps present within the project area are fire suppressed. The groundcover coverage is sparse and diversity is low, which is likely a result of intense competition with woody species.

The Dome Swamps contain a thick woody shrub understory of St. John's wort (Hypericum chapmanii), titi, myrtle leaf holly (Ilex myrtifolia), and fetterbush (Lyonia lucida).

The bottomland forest traversed by the alternatives surrounds both the Blackwater River and Clear Creek, which are both blackwater streams that drain into the Pensacola Bay.

State and Federal agencies may exert jurisdiction over all wetland areas located within the alternatives. Direct wetland impacts and impacts from shading will require permits from both agencies and mitigation will likely be required for the direct impacts.

4.10 Wildlife and Habitat

Both alternatives traverse developed and undeveloped areas. The southern portion of the roadway from the intersection with US 90 north to the Blackwater River floodplain follows an existing road that is surrounded by institutional and commercial development. Over the Blackwater River, the alignment follows an existing Gulf Power easement that crosses the Blackwater River. The bridge will continue west on the north side of the Blackwater River and terminate after crossing the BHST. West of the trail, the proposed alignment continues west through agricultural lands and over Munson Highway to the floodplain of Clear Creek. A bridge will span the Clear Creek floodplain wetlands and open water. As the road continues west (Alternative 1) and northwest (Alternative 2), both alternatives cross primarily silvicutural lands until the intersection with SR 87 north.

Wildlife and Habitat received Substantial rating during the initial ETAT review. This was due to the potential for impacts to listed species and habitat areas. A designated critical habitat (unit RFS-2, Subunit A) for the Reticulated flatwoods salamander (RFS) (on federal and state endangered species list) is located within the study area (see **Figure 4.1**). Designated critical habitat is defined as a specific area within the geographic area occupied by a federally listed species at the time it is listed. Critical habitats contain physical and biological features that are considered essential to the conservation of the species and require special management considerations for protection. This critical habitat unit contains all of the primary constituent elements and supports multiple life stages of the RFS.

At the proposed bridge crossing, the Blackwater River is part of critical habitat unit 4 for the Gulf sturgeon (on federal and state threatened species list) (see **Figure 4.1**), which consists of the Yellow River system in Santa Rosa and Okaloosa Counties, Florida and

Covington County, Alabama. The Blackwater River is a tributary to the Yellow River and is therefore included in the critical habitat unit. Both alternatives cross the Blackwater River.

It should also be noted that a number of federally and state listed wildlife species have a potential for involvement in this project due to the fact that the upland habitats are predominantly suitable for multiple species and the wetlands have relatively minor disturbances.

The USFWS documents the potential occurrence of approximately 79 federal and or state listed species in Santa Rosa County. This includes approximately 34 plant species, 17 avian species, four amphibians, ten reptiles, four mammals, and four freshwater mussels. Most of these species are state listed only. There are 17 federally listed species potentially occurring in Santa Rosa County, along with one candidate species (gopher tortoise), one species proposed for listing (Red Knot), and one species with special protection status (Bald Eagle). **Table 4.2** shows the list of federal and state listed species potentially occurring in Santa Rosa County. Specifically, the alternatives traverse sandhill habitat that is appropriate for gopher tortoise (on state threatened species list). Approximately 55 potentially occupied burrows were seen within the project study area (see **Figure 4.1**).

Table 4.11 List of Federal and State T&E Plant and Animal Species Potentially Occurring in Santa Rosa County

Fish		Federal Status	State Status
Scientific Name	Common Name		
Acipenser oxyrinchus desotoi	Gulf Sturgeon	LT	FT
Crystallaria asprella	Crystal Darter	N	ST
Etheostoma histrio	Harlequin Darter	N	SSC
Fundulus jenkinsi	Saltmarsh Topminnow	SC	SSC
Notropis melanostomus	Blackmouth Shiner	N	ST
Pteronotropis welaka	Bluenose Shiner	N	SSC
Bivalves (Mussels)		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Fusconaia escambia	Narrow Pigtoe	T	N
Fusconaia rotulata	Round Ebonyshell	E	N
Pleurobema strodeanum	Fuzzy Pigtoe	T	N
Villosa choctawensis	Choctaw Bean	E	N
Amphibians		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Ambystoma bishopi	Reticulated Flatwoods Salamander	LE	FE
Hyla andersonii	Pine Barrens Treefrog	N	SSC
Rana capito	Gopher Frog	N	SSC
Rana okaloosae	Florida Bog Frog	N	SSC
Reptiles		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Alligator mississippiensis	American Alligator	SAT	FT(S/A)
Caretta caretta	Loggerhead	LT	FT
Chelonia mydas	Green Turtle	LE	FE
Dermochelys coriacea	Leatherback	LE	FE

Lepidochelys kempii	Kemp's Ridley	LE	FE
Eretmochelys imbricata imbricata	Hawksbill	LE	FE
Drymarchon couperi	Eastern Indigo Snake	LT	FT
Gopherus polyphemus	Gopher Tortoise	N	ST
Macrochelys temminckii	Alligator Snapping Turtle	N	SSC
Pituophis melanoleucus mugitus	Florida Pine Snake	N	SSC
Mammals		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Sciurus niger shermani	Sherman's Fox Squirrel	N	SSC
Tamias striatus	Eastern Chipmunk	N	SSC
Trichechus manatus	Manatee	LE	FE
Ursus americanus floridanus	Florida Black Bear	N	Delisted
Birds		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Charadrius alexandrinus	Snowy Plover	N	ST
Charadrius melodus	Piping Plover	LT	FT
Cistothorus palustris marianae	Marian's Marsh Wren	N	SSC
Egretta caerulea	Little Blue Heron	N	SSC
Egretta thula	Snowy Egret	N	SSC
Egretta tricolor	Tricolored Heron	N	SSC
Eudocimus albus	White Ibis	N	SSC
Falco sparverius paulus	Southeastern American Kestrel	N	ST
Haematopus palliatus	American Oystercatcher	N	SSC
Mycteria americana	Wood Stork	LE	FE
Falco peregrinus tundrius	Artic peregrine falcon	E	FE
Pelecanus occidentalis	Brown Pelican	N	SSC
Picoides borealis	Red-cockaded Woodpecker	LE	FE
Rynchops niger	Black Skimmer	N	SSC
Sternula antillarum	Least Tern	N	ST
Haliaeetus leucocephalus	Bald Eagle	BGEPA	
Calidris canutus	Red Knot	Proposed	
Plants and Lichens		**Federal Status**	**State Status**
Scientific Name	**Common Name**		
Andropogon arctatus	Pine-woods Bluestem	N	LT
Baptisia calycosa var. villosa	Hairy Wild Indigo	N	LT
Calamovilfa curtissii	Curtiss' Sandgrass	N	LT
Calycanthus floridus	Sweet-shrub	N	LE
Carex baltzellii	Baltzell's Sedge	N	LT
Chrysopsis gossypina ssp. cruiseana	Cruise's Goldenaster	N	LE
Cladonia perforata	Perforate reindeer lichen	E	FE
Drosera intermedia	Spoon-leaved Sundew	N	LT
Epigaea repens	Trailing Arbutus	N	LE
Hexastylis arifolia	Heartleaf	N	LT
Illicium floridanum	Florida Anise	N	LT
Kalmia latifolia	Mountain Laurel	N	LT
Lilium catesbaei	Southern red lily	N	LT
Lilium iridollae	Panhandle Lily	N	LE
Lobelia boykinii	Pond's Lobelia	N	LE
Lupinus westianus	Gulf Coast Lupine	N	LT
Macranthera flammea	Hummingbird Flower	N	LE

Magnolia ashei	Ashe's Magnolia	N	LE
Magnolia pyramidata	Pyramid Magnolia	N	LE
Medeola virginiana	Indian cucumber-root	N	LE
Pinguicula primuliflora	Primrose-flowered Butterwort	N	LE
Platanthera ciliaris	Yellow Fringe Orchid	N	LT
Platanthera integra	Yellow Fringeless Orchid	N	LE
Pogonia (Cleistes) bifaria	Fernald's Pogonia	N	LT
Polygonella macrophylla	Large-leaved Jointweed	N	LT
Potamogeton floridanus	Florida Pondweed	N	LE
Rhexia parviflora	Small-flowered Meadowbeauty	N	LE
Rhododendron austrinum	Florida Flame Azalea	N	LE
Sarracenia leucophylla	White-top Pitcherplant	N	LE
Sarracenia psittacina	Parrot Pitcherplant	N	LT
Sarracenia rosea (S. purpurea burkii)	Gulf Purple Pitcherplant	N	LT
Sarracenia rubra	Sweet Pitcherplant	N	LT
Stewartia malacodendron	Silky Camellia	N	LE
Xanthorhiza simplicissima	Yellow-root	N	LE

Habitat protection measures in the project area are ongoing by both state and local agencies. Santa Rosa County has included protection measures around Whiting Field in their Comprehensive Plan. Policy 3.1.B.5 states that the county will continue to purchase agricultural and conservation easements for the purposes of preserving farmland adjacent to military facilities. Also, there are Florida Forever Board of Trustees Project areas and as of June 30, 2011, the Florida Department of Environmental Protection (FDEP), using Florida Forever Funds, purchased several additional parcels east of Whiting Field Naval Air Station that are part of the Clear Creek/Whiting Field Florida Project. Likewise, multiple parcels surrounding Whiting Field Naval Air Station are Florida Forever future/planned sites (see **Figure 4.1**). The project team coordinated with the County, Whiting Field, and with the agencies extensively about these areas. The team received input on the best locations for the alternatives, as well as the access management needs of the future roadway to ensure the most appropriate locations were chosen that still met the purpose and need of this new roadway. Adjustments were made to all northern corridors (1-3) as a result of these meetings. The correspondence is located in **Appendix A**, meeting minutes.

5. ENVIRONMENTAL CONSEQUENCES

The environmental consequences section of this document describes in detail the impacts associated with the two alternatives. Included in the introduction to each of the following topics are summaries of the comments received from reviewing agencies through the Efficient Transportation Decision Making (ETDM) process.

5.1 Social and Economic Impacts

This project is being advanced in compliance with nondiscrimination authorities, including Title VI of the Civil Rights Act. FDOT will not exclude from participation in, deny the benefits of, or discriminate against anyone on the basis of race, color, national origin, sex, age, disability, religion or family status.

5.1.1 Social Impacts

The ETAT comments on social impacts included ratings of None and Moderate. The USEPA included an acknowledgement in their comments of the social benefits resulting from the proposed roadway due to congestion relief and an improvement in mobility. During the alternatives location development, the project team considered community cohesion, noise, visual aesthetics, potential relocations, archeological and/or historical areas, etc. In addition, environmental justice concerns were also addressed. Environmental justice is the fair treatment and meaningful involvement of all people impacted by this project regardless of race, color, national origin, or income.

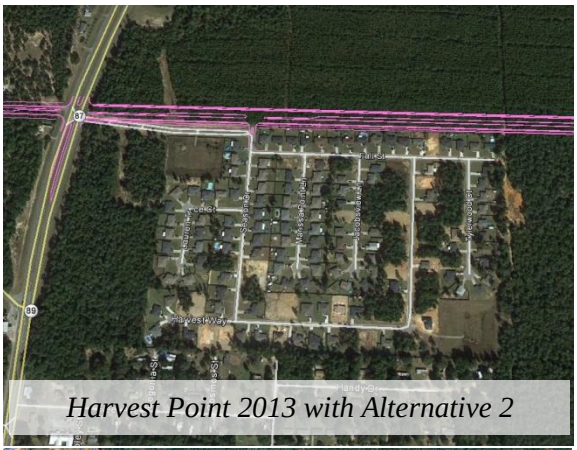
This project will likely result in the need for one to two residential displacements, with no potential community services (i.e. churches, community centers, social services, etc.) impacted. As illustrated in **Table 5.1**, both viable alternatives generally have the same social impacts, with Alternative 2 impacting one additional residential and two additional agricultural parcels.

Table 5.1 Social Impacts

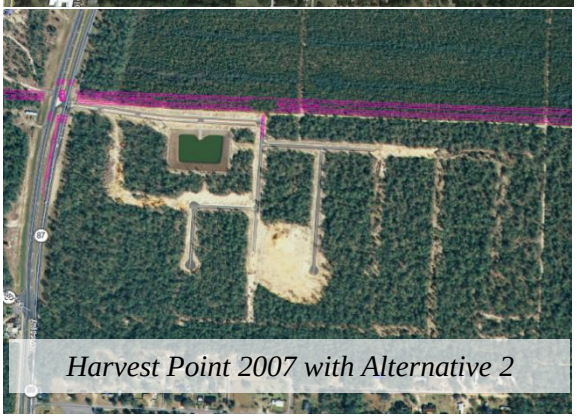
Alternatives	Residential Parcels		Manufactured Home	Business Parcels	Agriculture Parcels
	Vacant	S. Family Improved			
1	3	0	1	0	14
2	3-4	0	1-2	0	16

In all of the impacted residential areas, existing road right-of-way was utilized where possible to minimize displacement. Both alternatives do impact two mobile homes near the Munson Highway crossing. A 2014 review of the property owner tax files showed that both homes, though previously owned by Harrison Finance Company, Inc., a loan/finance company, have now been purchased by a Louisiana resident. One property is taxed as “vacant mobile home”. The other property is being taxed reflected as improved with only a shed. A field review showed the mobile home had completely burned since this study began. Alternative 2 impacts an additional mobile home on 87N. Efforts to contact the property owner were unsuccessful by mail and

site visits during the alternatives development stage of this project. Another site visit to the property after the alternatives were developed showed no activity on the site. A site visit on 7/9/14 showed electricity to the mobile home. It is assumed, the home is now occupied *(See Section 5.1.5 Relocation).*



Harvest Point 2013 with Alternative 2



Harvest Point 2007 with Alternative 2

Many considerations of the two viable alternatives were analyzed to reduce the impact to the social environment. For instance, the project team selected impacted parcels that were vacant or had abandoned homes; avoided community facilities like fire stations, hospitals, libraries, places of worship and schools; utilized the most current Census data to avoid the lower income/minority area just south of US 90 and north of Old Bagdad Highway and the minority areas between SR 87N and SR 89N and along the Munson Highway Corridor in the Milton City limits; and followed existing impacted properties along transmission lines. Based on the above discussion and analysis *(See section 4.1.2 Demographics)*, neither Alternative will cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23.

The social impacts expected generally arise from the requirements for right of way associated with the proposed action, and apply to both of the remaining alternatives. The majority of the study area does not include dense residential areas, or areas with extensive housing. However, both alternatives do intersect SR 87N in areas that have seen growth since the study began in 2009. Alternative 1 joins SR 87N at Oakland Drive. This roadway includes scattered established homes. Property lines for the residences were followed for the roadway widening to ensure the residential parcels were not impacted. Alternative 2 intersects SR 87 and realigns SR 89 just north of a new subdivision. When this study began, there were few homes in the area. Now there are nearly 100 homes within this subdivision, with 16 of the now developed parcels within 50 ft. of the proposed corridor.

Apart from the possible displaced home, the short term effects of the proposed action will be felt by those that reside nearby during the period of construction. The long term effects will be associated with increased noise from a new/widened roadway (See **5.4.3 Noise**). In comparison, other long term effects are improved mobility for residents as well as through traffic; savings in time and fuel provided by a new, more direct connection from I-10 to Whiting Field and the northern part of the county; multi-modal enhancements and opportunities; and enhanced motorist safety by removing nearly 20% of the traffic from constrained portions of US 90.

Also, the project team made every effort to minimize fragmentation issues for agricultural parcels by following parcel lines and/or utilizing county owned lands or lands not in an active farming use where available. These efforts resulted in limiting impacts to approximately seven (7) acres of Prime Farmlands (from the US Department of Agriculture Natural Resources Conservation Services (USDA-NRCS) GIS data; see section 5.4.12 and Appendix H). Likewise, design considerations were analyzed such as insuring appropriate access points to residences and as the alternatives approach the areas of US 90 and SR 87N, where land uses become denser, a narrower urban typical section will be used to minimize impacts. In addition, concessions in the design also included the review of Whiting NAS's preference for the avoidance of their Accident Potential Zones (APZ), as well as the use of dry ponds near the base to eliminate impacts to the military facility. Also, every effort was made during the final Alternatives location selection to reduce the impacts to the Santa Rosa Criminal Justice Center and the Santa Rosa Corrections Facility by utilizing the existing improved roadways in the area, and eliminating/minimizing any need for right-of-way impacts by utilizing an urban typical section in that area.

5.1.2 Economic Impacts

The project area has seen much development over the last few decades with the growth of the industrial park, the location of the Sheriff's office and correctional facilities in East Milton, and the construction of the East Milton Recreational Park. There is much potential for further growth, however capacity and widening limitations of the US 90/SR 87 corridor will drive the growth away from East Milton, as is already evident in the abandoned subdivisions and vacant industrial buildings showing up over the course of this study. According to the University of Florida's Bureau of Economic and Business Research (BEBR) Report and the FL-AL Transportation Planning Organization's (TPO) 2035 Long Range Transportation Plan (LRTP), the population is expected to grow another 45% to nearly 220,000 people by 2035. This population growth will increase the vehicular demand on the US 90/SR 87 segment, making growth and evacuation difficult due to a lack of roadway capacity. The project, utilizing either Alternative 1 or 2, would provide capacity as well as create a more direct overland access between the military installations in the area: Whiting Field, several Naval Outlying Fields (NOLF's), and Eglin Air Force Base.

In addition, there are seven existing or planned industrial parks within or near the study area. Three industrial parks have been completed. The remaining four industrial parks are currently undeveloped. The proposed SR 87 connector will benefit the industrial parks and the local economy by significantly improving access to the parks and regional connectivity especially for trucks destined to Alabama. Specifically, the Santa Rosa County Aviation Industrial Park, located adjacent to Eglin, will be provided improved access to the SIS facilities to the south, both Interstate 10 and SR 87S. The county continues to seek to bring more industries with higher paying jobs into their industrial park, making improved access a priority in this endeavor. In addition, the proposed improvements will likely increase property values for

commercial uses within the County that benefit from the new roadway improving the County's tax base.
Access to intermodal facilities and movement of goods and freight are important considerations in the development of an effective transportation system. This is an enhancement provided by this project because it will supply a link from the northern areas of the County to areas along the interstate and on to the coast. In addition, it will establish the needed link between Whiting Field and I-10, and SR 87S SIS facility.

During the data collection phase of this study, 98 businesses were located on the US 90/SR 87 corridor from SR 87S to SR 87N and SR 87N from US 90 to Whiting Field. These businesses represented a variety of types including Pawn Shops, Gas Stations, Dry Cleaners, Restaurants, Warehouses, Storage Facilities, Florists, Eye Doctors, Law Offices, Medical Offices, etc. The majority of these businesses (estimated to be 88%) serves mainly local customers and will not likely be detrimentally impacted by a potential bypass. Likewise, the businesses, churches, county/city offices and school board offices in the Historic Downtown Milton area serve mostly local residents and not pass through traffic. The business community, especially in the historic area will realize some immediate benefit due to the reduction of truck traffic through the area and along the congested US 90 corridor.

The proposed roadway would also provide an extension of SR 87 and would help facilitate access from the south to eco-tourism businesses (canoeing and camping), and to the Blackwater River State Park facilities, especially the parks at the Krull Recreational Area and Bear Lake. The County has also invested extensively in recreational facilities north of US 90. The bicycle and pedestrian enhancements and improvements proposed along the new facility would increase safety, pedestrian mobility, connectivity between residential and nonresidential areas, and would provide access for transportation disadvantaged populations. The improved mobility is discussed further in *Section 5.1.6*.

5.1.3 Land Use

Changes in land use consist of the conversion to transportation land use from single family residential, industrial and agricultural land uses. Among the affected parcels, the majority are assigned land use categories of agriculture/silviculture and industrial according to the Santa Rosa County Land Use information obtained from their GIS department. There are some Single Family Residential areas in the vicinity the alternatives intersect SR 87N, as well as in the area near the proposed Munson Road intersection. The future land use maps for Santa Rosa County indicate that much of the area surrounding the southern portion of the proposed roadway (both alternatives) will remain industrial, or will convert from silviculture to industrial. See **Figure 4.4** Future Land Use.

The Project Team has also recognized the County and Team Santa Rosa's efforts on a Joint Land Use Planning initiative. This study is a joint land use study that incorporates the land use planning efforts between Santa Rosa County and the NAS

Whiting Field Military Installation. The study area encompasses a nearly 8,000 acre area around Whiting Field in northern Santa Rosa County and includes an Aviation park on the east side of the base. With regards to Land Use in the vicinity of Whiting Field, the County's Comprehensive Plan provides guidance on development around the military base. In addition, the County's Land Development Code (LDC) further defines, for instance, protections for military airport zones (MAZs). In the LDC, some types of development are compatible with air operations, such as industrial development. The County is building the aviation industrial park adjacent to NAS Whiting Field, made possible by an agreement with the Navy. Santa Rosa County is nationally recognized for its cooperation with the Navy to achieve goals of both the county and the military. As a result, any Land Use in the vicinity of the military base is protected by the county's comprehensive plan. Extensive coordination between the project team and those involved in the Joint Land Use Planning initiative resulted in slight alignment shifts, proper pond designs, access management classifications, etc. to ensure the best possible locations and typical sections for the alternatives.

Alternatives 1 and 2 provide a bypass around Milton and a more direct route to SR 87N and the Joint Land Use Planning Area. In addition, they also intersect SR 87N in a moderately developed area, potentially serving existing residents and businesses more efficiently. Likewise, they will serve the economic development of the area as they both provide an additional North-South Corridor; and a more direct route to the Aviation Park, Whiting's East Gate and to the proposed four-lane section of SR 87N to the State Line from I-10 (See more Land Use information in *Section 5.4.4 Wetlands)*.

5.1.4 Aesthetics

Given the length of the alternatives, the proposed SR 87 Connector Project crosses various natural and built communities. Natural areas include the Blackwater River, the BHST, Clear Creek, forested areas and wetlands and undeveloped areas like pastureland. Developed areas include suburban residential developments. The Blackwater River is the most prominent natural feature along both of the alternatives and is designated as an OFW. Crossing the river will offer scenic views to the east and west. However, the view to the east will be impacted by the existing transmission lines that cross the river immediately adjacent to the roadway right of way. Views from the roadway will be impacted by transmission lines in many locations along the two alternatives because the alignments closely follow the transmission lines to reduce the roadways impacts to the more undisturbed landscapes.

Viewpoint Locations

Three viewpoints were chosen to represent the areas that will be most affected by the two Build Alternatives. All three viewpoints are associated with natural areas that are somewhat undisturbed. The viewpoints are also represented by the three bridge locations for both Build Alternatives.

Blackwater River Crossing: The Blackwater River has a beautifully scenic landscape. Different locations to cross the river were evaluated, most were locations that the natural environment had already been disturbed to a degree. The location that was selected is adjacent to a large transmission facility. It was also at one of the narrowest sections of the river. As can be seen in the picture to the top right, the river has a tranquil setting. The picture to the middle right shows the transmission facility just east of the bridge crossing. The visual quality in this area is high. The visual quality for this area will decrease to average because of the intrusion of a large structure spanning the river. The area is, however, fairly remote and the river activity in this area is low, so the visual impact will be experienced by few. It should be noted that the proposed bridge will offer new viewing opportunities of the river. The proposed structure will be somewhat simple with a fairly low profile minimizing the structures visual intrusion.

Looking across the Blackwater River at the proposed bridge location

Blackwater Heritage State Trail (BHST): The existing visual quality for this area is moderately high. Trail users are likely to have high sensitivity to visual change. Visual quality can be expected to slightly decrease due to the introduction of a structure. However, because the proposed crossing is to be grade separated, there will be little impact on the trails operations.

Existing BHST

The pictures below are renderings of how the trail might look with the bridge crossing. Since the trail corridor is fairly narrow. The visual impact is somewhat limited.

Rendering of proposed bridge crossing over the BHST

Rendering of proposed bridge crossing over the BHST

Clear Creek: The Clear Creek crossing was the third viewpoint location selected. Clear Creek is a sand-bottomed stream with a relatively unaltered flood plain fed by numerous small *seepage* streams. The FNAI also lists the rare seepage slope community as present in the watershed. These shrub thickets or boggy meadows form at the base of a slope where water moving downslope or seeping creates moist soil conditions. Pitcher plants are commonly found on seepage slopes in the area. The

Clear Creek Watershed north of the proposed bridge crossing

conservation area provides habitat for many endangered and threatened plants and animals, including gopher tortoises, southeastern weasel, white-topped pitcher plant, spoon-leaved sundew, panhandle lily and the hairy-peduncled beakrush. Much like the location selected for the Blackwater River, the crossing for Clear Creek is immediately adjacent to the transmission line easement. The easement area is highly disturbed as it has been totally cleared and is regularly maintained by mowing. As seen on the picture above, the area north of the creek crossing remains in its more natural state. Though this moderately high quality view will be decreased by the roadway, the roadway will buffer the view from the very low quality views of the power easement. Again like the river crossing, this creek crossing occurs in a fairly remote location rarely seen by the public. As such, the bridge will offer new viewing opportunities of the creek.

5.1.5 Relocation

A Conceptual Stage Relocation Plan (CSRP) was prepared on May 23, 2012 in compliance with Florida Statute 339.09, and the Uniform Relocation Assistance and Real Property Acquisition Act of 1987 (Public Law 91-646). Parcel impacts as a result of Alternatives 1 and 2 were analyzed. In the report, Alternative 1 was proposed to intersect SR 87N, thus resulting in direct impacts to one business along the east side of the SR 87N/SR 89 intersection. Impacts to this business included the potential loss of parking, forced relocation of gas pumps and access issues. Since the CSRP was submitted, the design of this intersection has been adjusted to avoid any impact to the gas station. Alternative 2 will intersect SR 87N further north, and will impact two residential properties located along the west side of SR 87N. Impacts to these properties may require one relocation. As of 7/9/14, the mobile home impacted had electricity and is assumed occupied. This home may require relocation.

The implementation of either alternative would include impacts to residences along Eagle's Way, one of these (7524 Eagle's Way) may require relocation. As of a field visit on 7/9/14, this home is currently vacant. In 2011, the ownership of this property was transferred to a finance company, but has since been purchased along with surrounding parcels by a Louisiana resident. The property is currently being taxed as "vacant mobile home". Due to existing damages noted during a field visit of the mobile home at 7530 Eagle's Way, this residence will not require relocation. It was fully destroyed by a fire.

Table 5.2 Residential Relocations/Impacts

Address	Alternative	Owner/ Tenant	Remarks
7097 Highway 87N	Alternative 2	Tenant	854 Square Feet, built 1981
7524 Eagle's Way	Alternatives 1 and 2	Vacant	798 Square Feet, built 1986
7530 Eagle's Way*	Alternatives 1 and 2	N/A	1,064 square feet, built 1985

*Will not be relocated due to existing damages

Comparable replacement housing for sale and rent is available in Milton. However, there may be some last resort rent supplements and last resort replacement housing payments necessary. Last resort housing payments would be used in order to place the relocatees in decent, safe, and sanitary housing, if necessary. Should last resort housing be constructed, the housing would be available before the displacees are required to vacate their dwellings. The data collected as of February 22, 2012 shows the availability of replacement sites in order to accommodate the relocation of any displaced parties within the respective residential areas from which they will be displaced. The data collected shows that a total of 61 mobile homes are available for sale (ranging from $15,000 to $160,000), 30 mobile homes are available for rent (ranging from $140 to $1000 per month), 80 homes are available for sale (ranging from $25,000 to $199,000), and 87 homes are available for rent (ranging from $500 to $1895 per month).

To minimize the unavoidable effects of ROW acquisition and displacement of people, the FDOT will carry out a ROW and relocation program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646 as amended, Public Law 100-17).

The FDOT provides advance notification of impending ROW acquisition. Before acquiring ROW, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights. No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date and no occupant of a residential property will be required to move until decent, safe and sanitary replacement housing is made available. “Made available” means that the affected person has either by himself/herself obtained and has the right of possession of replacement housing, or that the Florida Department of Transportation has offered the relocatee decent, safe and sanitary housing which is within his financial means and available for immediate occupancy.

At least one relocation specialist is assigned to each highway project to carry out the relocation assistance and payments program. A relocation specialist will contact each person to be relocated to determine individual needs and desires, and to provide information, answer questions, and give help in finding replacement property. Relocation services and payments are provided without regard to race, color, national origin, age, sex, religion, disability, or family status.
All tenants and owner-occupant displacees will receive an explanation regarding all options available to them, such as (1) varying methods of claiming reimbursement for moving expenses; (2) rental replacement housing, either private or publicly subsidized; (3) purchase of replacement housing; and (4) moving owner-occupied housing to another location.

Financial assistance is available to the eligible relocatee to:

1. Reimburse the relocatee for the actual reasonable costs of moving from homes, businesses, and farm operations acquired for a highway project;

2. Make up the difference, if any, between the amount paid for the acquired dwelling and the cost of a comparable decent, safe and sanitary dwelling available on the private market;

3. Provide reimbursement of expenses, incidental to the purchase of a replacement dwelling;

4. Make payment for eligible increased interest cost resulting from having to get another mortgage at a higher interest rate. Replacement housing payments, increased interest payments, and closing costs are limited to $22,500 combined total. A displaced tenant may be eligible to receive a payment, not to exceed $5,250, to rent a replacement dwelling or room, or to use as down payment, including closing costs, on the purchase of a replacement dwelling.

The brochures that describe in detail the Department's relocation assistance program and Right of Way acquisition program are "Your Relocation: Residential", "Your Relocation: Business, Farm and Nonprofit Organizations", "Your Relocation: Signs" and "The Real Estate Acquisition Process". All of these brochures are distributed at the public hearing and made available upon request to any interested persons.

This project has been developed in accordance with the Civil Rights Act of 1964, as amended and the Civil Rights Act of 1968 guaranteeing each person equal opportunity in housing.

5.1.6 Mobility

At present, there is no direct connection between SR 87S serving the southern section of Santa Rosa County and SR 87N serving the northern section of the County and providing direct access to Alabama. There is also no direct connection between NAS Whiting Field and Eglin Air Force Base. Therefore, the benefit of the proposed SR 87 Connector are to: (1) provide new roadway facility linking SR 87S with SR 87N, (2) provide additional capacity and improve regional connectivity from areas of high growth in northern Santa Rosa County to I-10 and to areas further to the south, (3) improve access to and from I-10 for NAS Whiting Field, and the County's Joint Use Planning Area near NAS Whiting Field, and (4) provide a direct connection between NAS Whiting Field and Eglin AFB. Furthermore, the new connector would be expected to relieve the traffic congestion at Ward Basin Road and its intersection with US 90, and provide much needed relief to the US 90 Blackwater Bridge.

Connectivity: The initial ETAT review resulted in a rating of Enhanced for Mobility. The study analysis found that both Alternatives 1 and 2 significantly improve mobility by providing a new bridge crossing in a more strategic location accommodating both travel from the northeast and northwest to areas south, and the reverse for northbound travel. Greater mobility is afforded by providing an alternate to what would otherwise be channeling traffic through the congested areas of the City of Milton. The remaining

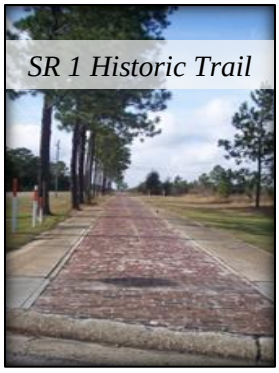
alternatives also provide better links north and south serving Whiting Field. Alternatives 1 and 2 are consistent with the region's Long Range Transportation Plan (LRTP) as these alternatives are in proximity of the originally intended location of the Outer Beltway project from the previous Transportation Planning Organization studies outlined in the Corridor Report prepared for this project. Hurricane evacuation would also be greatly enhanced with SR 87 finally achieving continuity as a North-South connector from US 98 and the beaches to Alabama.

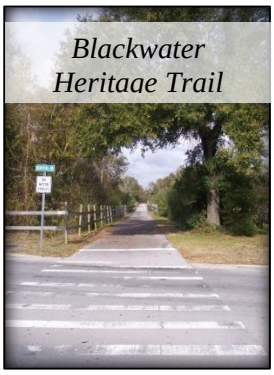
Also, Santa Rosa County is currently home to eight airfields utilized by the Navy, the largest being NAS Whiting Field. Whiting is supported by 14 Naval Outlying Fields (NOLF's) spread throughout Santa Rosa County, Escambia County, Florida and the counties of Baldwin, Conecuh and Escambia in Southern Alabama. Whiting's mission is to provide services and materials to support the training of US Navy, Coast Guard, Air Force, Marine and international student aviators in fixed-winged training as well as helicopter training. Whiting Field is responsible for 10% of the USN/USMC flight hours worldwide and is a vital flight training area for the US Navy. This vital role in the nation's defense program also represents a large participation in the Santa Rosa County job base and economy. Thousands of military, civilian contractor, and private industry personnel and/or students work or train at this facility and efficient methods of transporting goods and people to and from the base are essential to the success of the base's mission. In addition, Santa Rosa County's Aviation Park is located at Whiting Field under joint agreement. Currently, the major roads to Whiting include SR 87 and CR 191, neither of which offers a connection to I-10 without travelling along the congested US 90/SR 87 alignment.

Safety: As stated in ***Safety, Section 2.2.6***, the SR 87 Connector is proposed to be a new roadway that will connect SR 87S and SR 87N. This will provide a new alignment to reroute through-traffic headed north from I-10. Presently, the SR 87 corridor follows along the congested US 90 corridor for five miles. This portion of the corridor is operating at a LOS F on most segments, and is the area where the only fatality in the corridor occurred. Improvements to the existing roadway in this vicinity are difficult due to the historic downtown Milton area. By developing a new corridor that does not follow the existing US 90 alignment, the traveler would be able to avoid this high traffic area.

The Northwest Florida Region has been identified as one of the most hurricane vulnerable areas of the United States. SR 87 is one of the most important Hurricane Evacuation Routes. The Garcon Point Bridge and the Pensacola Bay Bridge can be closed during a hurricane or tropical storm event, making SR 87 the single access out of the beach areas like Gulf Breeze and Navarre, and the only access into the area for Emergency First Responders. However, with a portion of the current alignment utilizing a congested portion of US 90 and traversing historic downtown Milton, SR 87 cannot function as a continuous roadway. Therefore, the proposed SR 87 Connector will provide a direct route from the Florida Coast north into Alabama, significantly reducing evacuation times and providing increased evacuation capacity. In addition, the proposed connector would relieve US 90 and improve traffic flow through the City of Milton.

A detailed traffic analysis was performed to document existing traffic conditions as well as to establish projected design year (2035) traffic requirements. The analysis indicates that for the **No Build Alternative**, five (5) roadway segments along US 90 will operate at a failing LOS in 2015, nine (9) segments in 2025 and eight (8) segments in 2035 (after widening US 90 from Avalon Boulevard to SR87N). **Both Build Alternatives** will divert traffic from US 90 and reduce the number of failing segments along US 90 to two (2) segments in 2015, five (5) segments in 2025 and three (3) segments in 2035. All other roadway segments will operate at acceptable LOS (SR 87 Connector DTTM, October 2012).


SR 1 Historic Trail


Blackwater Heritage Trail

Multi-modalism: There are currently no transit routes serving the areas around Milton and in Santa Rosa County, though the Comprehensive Plan Policy 4.1.D.10 does state the county will actively participate in the TPO's Transit Development Plan in the goal of eventually providing transit along US 90 again. Since there is no current transit in the area, the multimodal improvements are based on the pedestrian and bicycle facilities provided that will address the need for greater bicycle and sidewalk connectivity in the County with connections to the BHST and the SR 1 Historic Trail, the two most notable existing pedestrian/bicycle facilities in the region. Both Alternatives make the connection with the trails increasing multi-modal opportunities in the area. The SR 87 Connector will greatly enhance the trail system by providing the community pedestrian/bicycle facilities linking the BHST to the Historic SR 1 Trail along US 90. Likewise, future links can be made to area parks and recreation facilities. It should be noted that though the US 90 Corridor shared between SR 87 and US 90 in the study area has five foot paved shoulders to serve as bicycle lanes, it currently has unconnected pedestrian features. There are no pedestrian features from historic downtown east to just prior to the Ward Basin intersection. There are sidewalks that begin just east of Marquis Bayou Bridge on US 90 and are continued east as part of the improvements to the Ward Basin Rd. intersection. Though the sidewalks end just east of the intersection, the rest of the US 90 corridor to the east in the study area has the SR 1 Trail that runs parallel along the roadway, serving as a multiuse path. The SR 87 Connector will provide pedestrian and bicycle features from the SR 1 Historic Trail, over Blackwater River, and will tie into the Blackwater Heritage Trail. This provides a link for the two trails that has never existed. The pedestrian features included in this project will be designed following the FDOT Design Standards that have been revised to reflect accessibility requirements required by the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the Florida Accessibility Code (FACBC).

Finally, in addition to improved connectivity to Whiting Field and the Aviation Park, the roadway will serve the existing Park and Ride facility at the intersection of US 90 and SR 87S. Safety improvements to the ingress and egress to the facility will be included in the design of this project.

5.2 Utilities and Railroads

5.2.1 Utilities

To determine the extent of utility adjustments required by project improvements, local utility companies that may have facilities within the project limits were contacted and requested to submit the location of their existing and planned facilities. Companies found in the vicinity (see previous **Table 4.1**) of the proposed project area were then contacted and requested to submit the location of their existing and planned facilities. A Preliminary Utility Conflict Matrix (**Table 5.3**) has been prepared identifying the utility owners in the study area and their approximate utility sizes and locations. As the study progresses, continued coordination will take place with all pertinent utility companies. It should be noted that location information was collected for planning purposes and more detailed information may be needed prior to construction.

We have identified future utility installation plans and considered the effects on the proposed improvements. One such project will be a new Waste Water Treatment Plant (WWTP) that is to be installed by East Milton and Santa Rosa County. The parcel for this project was given to East Milton by Santa Rosa County just south of the Blackwater River. This proposed site required the roadway alignment to be adjusted to the west. The County has proposed sanitary sewer lines leading to the WWTP from the north, parallel to the east side of the power easement crossing Blackwater River. These lines should not impact the proposed roadway which is parallel to the easement on the west side. It should also be noted that both alternatives will encroach onto approximately 19.8 acres of a Gulf Power easement, possibly impacting transmission and distribution lines/poles. As a result, transmission poles are expected to be relocated along the project. Coordination with Gulf Power is on-going. The remainder of utilities will only require minor adjustments such as adjusting meter and valve boxes (gas, water and sewer), adjusting manholes and inlets (sanitary sewer and storm water), and relocating telephone pedestals, utility markers/signs, and power supply stations.

Table 5.3 Preliminary Utility Conflict Matrix

Utility Owner	Contact	Utility Information	Notes/Discussion
AT&T Communications	Steve Hamer	6 - 1.9" HDPE Ducts on north side of US 90	Runs under existing East Milton Road. May need adjustment due to new strain pole/mast arm.
AT&T Florida	Nancy Spence		***Pending additional coordination***
City of Milton	Joe Cook	4" H.P. Gas and 8" FM along East Milton Rd 10" Gravity Sewer perpendicular near shooting range 6" WM and 10" FM on Munson Hwy 6" WM on Winston Brown Rd. 2" HP Gas on SR 87N/ SR 89N	Gas and FM may be impacted due to widening along East Milton Rd. 10" gravity sewer, 6" WM, 10" FM and 6" WM all are perpendicular to alignment, may be affected. Gas on SR 87N may be affected due to widening on Oakland Drive west of SR 87N.
CSX Railroad	Hal Gibson 904.359.1048	Railroad along northside of US 90	***Pending additional coordination***
East Milton Water System, Inc.	Dink Helms 850.623.8750	12" Water along east side of East Milton Road 12" Water along west side of SR 87S 10" Water along West side of Judicial Blvd 10" Water along south side of Opportunity Drive	12" water and 10" water along East Milton Rd, Judicial Blvd and Opportunity Drive may be affected due to widening.

Gulf Power Distribution	Chad Swails 850.429.2446	East Milton Road, Judicial Drive, Munson Highway, Oakland Drive east of SR 89N, Season Drive (buried), SR 87N (to residences), SR 89N (to residences)	• East Milton Road and Judicial Drive approximately 20 poles impacted • Oakland Drive East approximately 20 poles impacted • SR 87N four poles impacted • SR 89N 6 poles impacted
Gulf Power Transmission	Tracy Judson 850.444.6085	2- 115kV lines in east/west easement north of prison 1- 115kV and 1- 230kV in easement crossing Blackwater River 1- 230 kV in easement north of Salamander Habitat	• 1 structure to be adjusted in easement N of prison • 2 structures (1- 115kV, 1-230kV) adjusted at Pat Brown Rd • 1 structure (230kV) adjusted at easement triangle • 7500' of 115kV adjusted • 3000' of 230kV adjusted • 2 structures (230kV & 46kV) adjusted at Munson Hwy
Level 3 Communications	Kelli Whitehead 720.888.4988	96 fiber, 2 - 1.5" Orange and 1-1.5" Black with Orange stripe HDPE along north side of US 90 between SR 1 and US 90	Bored under East Milton Road, widening may not affect. 10" Steel pipe for 895'.
Mediacom	Eddie Arnold 850.934.2560	Cable TV, buried & overhead, located throughout residential areas	***Pending additional coordination***
Okaloosa Gas	Essa Rhebi	8" and 12" Steel transmission pipe lines along north side of US 90	Runs under existing East Milton Road. May need adjustment
Point Baker Water System, Inc.	Tony Mathis 850.623.4545	Oakland Drive (east of SR 87N) - 2" WM and service laterals approximately 3.5' deep SR 87N - 8" WM (east side), 6" WM (west side) approximately 7' deep Harvest Point - 6" WM on south side SR 89N - 6" WM on south side	Water mains on Oakland Drive and Harvest Point may be affected. Those on SR 87N and SR 89N should not be affected.
Qwest	Jerry NeSmith 918.640.5964	Along CSX Railroad, 1 1/4" Green, 1 1/4" Blue, 1 1/4" Black, and 2" Orange HDPE	Directional bored under East Milton Road approximately 70' from west to 80' from east side
Southern Light, LLC	DJ McAuley	No facilities within project limits	***Pending additional coordination***
Sprint Nextel	Steve Thompson 678.852.2726	Fiber Optic along CSX Railroad, 40' south of C/L of railroad, 36' north of SR 1	No impacts anticipated
Verizon (MCI)	Charles Brunick 850.265.3652	12ct Fiber Optic in the median of US 90	Project will not affect fiber located in median

5.2.2 Railroads

There is one railroad crossing on each alternative. The SR 87 Connector will cross the CSX Railroad at approximately STA 112+00. This is an existing three lane, at-grade crossing that will be widened to provide two northbound lanes and three southbound lanes at the intersection of US 90 (see sheet 10 of Concept Plans, **Appendix D**). The southbound crossing provides one left turn, one thru lane and one shared thru-right turn lane. Coordination with CSX Railroad is on-going.

The CSX railroad is parallel to US 90 and also parallel to the SR 1 Historic Trail. The railroad track will be replaced during construction of the SR 87 Connector with a concrete pad around the track which provides a smooth crossing and allows bicycles and pedestrians a safer crossing. There will be pedestrian gates on both sides of the roadway to prevent pedestrians from crossing during train crossings. This existing

crossing does not have a concrete crossing, nor are there bicycle or pedestrian facilities. The project team coordinated with Mr. Hal Gibson (CSX Railroad) in regards to the frequency of trains utilizing this railroad. He informed the team that there are five trains per day passing through this location, and they travel at 49 mph.

5.3 Cultural and Historical Resources

5.3.1 Archaeological and Historic Resources

The project team conducted a Cultural Resource Assessment Survey (CRAS) in June and October 2011 as part of the SR 87 Connector PD&E Study. Two proposed alternatives, which comprised the project area of potential effects (APE), were initially examined; each began at the SR 87S/US 90 intersection and continued northward then turning west and connecting with SR 87N at Oakland Drive, or Season Drive.

A phased approach to assess the Section 106 resources was done due to the scope and magnitude of the project area, and the alternatives being considered. The imposing APE's along with a large number of potential historic structures requiring evaluation, and documentation within the project's vicinity made it difficult to complete this CRAS in one phase. Background research preceded field survey (ACI 2010) and was summarized in a Cultural Resources Probability Assessment (CRPA). The CRPA identified significant cultural resources within and around the proposed alternatives in order to assist and facilitate project planning associated with the PD&E study. The CRPA, which implemented background research, data analysis and reconnaissance surveys, identified the SR 1 Historic Trail (8SR1313) (NRHP) as the only critical cultural resource that would be impacted. This was then submitted to and approved by both the FHWA and the State Historic Preservation Officer (SHPO) (Kammerer 2011; Kendall 2011). Afterwards, a full CRAS report was initiated and completed in order to evaluate the preferred alternatives. **Appendix A** (March 30, 2011) includes the approval correspondence for the phased approach.

The purpose of the CRAS was to locate, identify, and aerially delimit any archaeological sites and historic resources (structures, buildings, bridges, and cemeteries) located within the project APE, and to assess their significance in terms of the criteria of eligibility for listing in the NRHP. The APE for the archaeological resources is the land contained within each proposed alignment, and the historical APE consists of the land within and immediately adjacent to each proposed alignment.

This work was conducted in compliance with the provisions of the National Historic Preservation Act of 1966 (Public Law 89-665), as amended, and the implementing regulations 36 CFR 800, as well as with the provisions contained in Chapter 267, Florida Statutes (F.S.). All work was carried out in conformity with Part 2, Chapter 12 ("Archaeological and Historical Resources") of the FDOT PD&E Manual (1999), and the standards contained in the Cultural Resource Management Standards and Operations Manual (Florida Division of Historical Resources 2003).

The background research included in the CRPA as well as a review of updates in the Florida Master Site File (FMSF) (July 2011 update), the NRHP, and the ETDM Report (#12597) revealed two archaeological sites within a half mile of the project area, but neither is within the APE. Based on the CRPA (ACI 2010) and other regional investigations, portions of the SR 87 APE were considered to have a moderate to high potential for prehistoric archaeological site occurrence, including the better-drained soils proximate to a river, creek, or other freshwater source. Most of the project area, however, was considered to have low archaeological potential. As a result of field survey, no prehistoric or historic archaeological resources were found within the APE.

It should also be noted that an interview with Mr. Michael Brown, a property owner, disclosed the potential for a sunken vessel (boat, barge of unknown date) in the Blackwater River, west of the power line corridor and purportedly near both proposed SR 87 alignments. However, an underwater survey is not within the scope of this project. Rather, survey and evaluation of this resource may best be addressed at a later date when a bridge design and location have been determined. There are remains of at least 15 known commercial vessels in the Blackwater River near Milton and Bagdad. These shipwrecks are part of Santa Rosa County's vibrant maritime heritage that made the region a center of commerce from the late 1800s through the 1930s. All of the known vessels are associated with deeper water areas, and are not in the shallow area that is being crossed by the proposed structure for this project.

Historical background research revealed two previously recorded historic resources within the historical APE: one structure (8SR1095) and one NRHP-listed linear resource (8SR1313). The structure is located at the south terminus of both proposed alternatives on the southwest corner of the US 90/SR 87S intersection. It is not considered NRHP-eligible due to its commonality of style and lack of significant historical associations. The NRHP-listed resource, State Road 1 (8SR1313), is a brick paved historic roadway within the APE at the intersection of US 90/SR 87. State Road 1 is significant as the first state road within the Florida Panhandle and maintains integrity as a historic brick road.

During the field surveys, five other historic structures and two other linear resources (railroads) were recorded within the historical APE. None of the five (8SR2130, 8SR2135, 8SR2137-2139) newly recorded historic structures is considered eligible for listing in the NRHP. They are common examples of their style, their integrity has been compromised, and they lack any significant historical associations. One of the newly identified historic railroads, 8SR2125, is located within the APE of both Alternatives 1 and 2 at the intersection of US 90 and SR 87, and the other newly identified historic railroad, 8SR2126, is located within the APE of Alternative 2. However, due to modern alterations and limited presence of the railroad beds within the APE, neither resource, as present within the APE, is considered eligible for listing in the NRHP.

With the exception of NRHP-listed State Road 1 (8SR1313), which is within the APE of both alternatives, none of the previously or newly recorded historic resources is considered eligible for listing in the NRHP due to the compromised integrity and the

lack of significant historical associations. In addition, there is no potential for a historic district due to the low concentration of historic resources with integrity and significance.

SR 1 Historic Trail Updates

Based on this data, the proposed undertaking may have an effect on the NRHP-listed State Road 1 (8SR1313). However, it should be noted that SR 87 currently traverses State Road 1 in this area. The proposed undertaking will allow vehicular traffic to continue crossing State Road 1, and the undertaking will simply widen the crossing with additional lanes, and a proposed multi-use trail (See **Figure 5.1**). Much of the brickwork along the trail has been replaced in a recent SHPO project. These replacement bricks and any other historic materials at the crossing will be coordinated with SHPO during the project's construction. Since the SR 1 Trail lies within the US 90 right-of way, no additional right-of-way will be required. Nonetheless, the proposed improvements will not alter the criteria of eligibility for the NRHP (Rucker and Mattick 1994). See Illustrations in *Section 5.3.3, Section 4(f)* for more information.

In accordance with the procedures contained in 36 CFR, Part 800, as previously stated, a Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for this project. As a result of the assessment, one historic linear site (State Road 1 – 8SR1313) was identified, which was determined to be listed on the National Register of Historic Places. Through the application of the Criteria of Adverse Effect, the Federal Highway Administration in consultation with the SHPO determined that the updated crossing did not constitute an adverse effect on the property. Based on the fact that no additional archaeological or historical sites or properties are expected to be encountered during subsequent project development; the Federal Highway Administration has determined that no other National Register properties would be impacted. (**Appendix A**, January-February 2012)

5.3.2 Recreation and Parkland

After a review of the Santa Rosa County Parks and Recreation list of facility parks, as well as a review of all known State and Federal parks and recreational areas, it was determined that there are no parks adjacent to either alternative and there are no direct or indirect impacts anticipated by the proposed action to any park. However, it was determined that both alternatives will have a direct impact to a recreational facility. Both alternatives cross the BHST, which is part of the Florida System of Greenways and is the most western rail trail. The BHST is an 8.02 mile recreational trail and conservation land managed by the FDEP Office of Greenways and Trails. To minimize any impact, the viable project alternatives over the BHST will include the construction of a grade-separated overpass that will traverse the 100-foot wide trail corridor ROW. No bridge pilings or other bridge infrastructure will be installed within

the trail corridor. There will, however, be a link provided to the BHST enabling access and connectivity to new pedestrian facilities associated with the proposed corridor improvements. See *Section 5.3.3* for more information.

In addition, Alternative 2 traverses lands that are planned for purchase as part of the Clear Creek/Whiting Field Florida Forever Board of Trustees Project. It should be noted that after coordination with the county and a review of the planned purchase properties, Alternative 2 was updated to be located on the extreme western border of this property and/or within the county owned parcels.

5.3.3 Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (49 USC 303, 23 USC 138) provides protection for significant publicly owned parks, recreation areas, historic properties (eligible for or listed on the NRHP), and wildlife and waterfowl refuges from conversion to a transportation use. FHWA may not approve such a conversion unless a determination is made that:

- There is no feasible or prudent alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from each use.

A "use" of Section 4(f) property occurs when:

- Land from a Section 4(f) property is acquired for a transportation project;
- There is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes; or
- The proximity impacts of the project on the Section 4(f) property, without acquisition of land, are so great that the purposes for which the property exists are substantially impaired (normally referred to as a "constructive use"). Proximity impacts typically include visual and noise effects.

There are two resources both Alternatives impact; the Historic SR 1 and the BHST.

SR 1 Historic Trail

SR 1 Historic Trail is located at the very southern end of the Alternatives at the intersection of US 90 and SR 87S. The trail runs parallel to US 90. The SR 87 Connector will cross the trail at the existing East Milton Road crossing, where the East Milton Road alignment is being expanded to accommodate the SR 87 Connector. As illustrated in **Figure 5.1**, enhancements will be made to the existing SR 1 Historic Trail crossing. Although this existing three lane crossing will be increased to five lanes, various pavement treatments, signage, and landscaping will be provided to increase awareness of the trail's crossing. A review by both the SHPO and FHWA determined that there was no acquisition of land required nor are there any adverse effects to the property, the crossing of the SR 1 Historic Trail and its associated improvements do not constitute a Section 4(f) involvement. (See **Appendix A**).

Figure 5.1: Proposed Enhancements at the SR 1 Historic Trail Crossing

Blackwater Heritage State Trail

Both alternatives cross a portion of the BHST approximately 0.6 miles east of Munson Highway in Santa Rosa County. The proposed project crossing over the BHST will include the construction of a grade-separated overpass that will traverse the 100-foot wide trail corridor. No bridge pilings or other bridge infrastructure will be installed within the trail corridor. There will, however, be a link provided to the BHST enabling access and connectivity with new pedestrian features associated with the proposed alternative improvements. In addition, with this new link, the BHST will be afforded additional local and regional connectivity by accessing the SR 1 Historic Trail's brick path located along US 90. As a result, the construction of the crossing will enhance access, but will not impact usage of the trail, nor will the project impact the vital functions of the trail. The crossing will not impact existing BHST restroom or trailhead facilities and is not proposed in the vicinity of any planned facility improvements. No relocation of the trail or other facilities is proposed for this project. It is anticipated that the project as planned will not adversely affect the portion of the trail that will be crossed by the proposed alignment. A Section 4(f) Determination of Applicability has been prepared for the BHST and reviewed by FHWA. FHWA has made the determination that Section 4(f) does not apply based on the design proposed (see **Appendix A;** May 2012, Environmental Determination of non-applicability, dated 10-26-2012, by FHWA; and the DOA.).

Figure 5.2: Proposed Connection at BHST

5.4 Natural and Physical Impacts

5.4.1 Pedestrian / Bicycle Features

In terms of pedestrian facilities, no existing pedestrian facilities will be adversely impacted. Where the proposed alternatives occupy existing roadway facilities, such as East Milton Road and Oakland Drive, there are no existing pedestrian facilities. Both Alternatives 1 and 2 will provide new pedestrian facilities. Originally, the pedestrian facilities/sidewalks were to run the entire length of the project. However, as a cost savings strategy initiated by the District's Value Engineering Team, sidewalks were eliminated. Instead, a multi-use trail will be provided as part of the project's southern urban sections for both alternatives, thus expanding the existing pedestrian network. Additionally, bike lanes are proposed adjacent to the roadway travel lanes. Designated bike lanes will be provided in the urban typical sections from the southern project limits to the Blackwater River bridge crossing and at the northern project limits. In the rural sections (the remainder central part of the project corridor), the paved shoulder will also be striped as a bicycle lane. In addition, the multi-use trail will be provided from US 90 at the Historic SR 1 Trail crossing north to the Blackwater Historic State Trail. By providing a vital link between the Historic SR 1 Trail and the BHST, the proposed roadway system provides regional connectivity for pedestrians and recreational trail users.

The two facilities impacted are the BHST and the SR 1 Historic Trail. The impacts (crossing) to these two facilities have been mitigated as outlined previously in Section *5.3.3 Section 4(f).* For the BHST, the proposed overpass separates the roadway from the trail, and for the SR 1 Historic Trail, intersection improvements will enhance the crossing as well as bring it up to design standards.

5.4.2 Air

SR 87 is located in Santa Rosa County, an area currently designated as being in attainment for all of the National Ambient Air Quality Standards (NAAQS) under the criteria provided in the Clean Air Act. The project alternatives were subjected to a carbon monoxide (CO) screening model that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The roadway intersection forecasted to have the highest total approach traffic volumes was SR 87N at US 90. This intersection was evaluated as a worst-case scenario.

Estimates of CO were predicted for the default receptors which are located 10 to 150 feet from the edge of the roadway. Based on the results from the screening model, the highest project-related CO one- and eight-hour levels are not predicted to exceed the one- or eight-hour NAAQS for this pollutant with the No Build or Build Alternative. The maximum CO concentrations predicted for the entire screening model occurred at the 2035 Build Alternative 2, where the concentration at one hour was 7.9 ppm and the eight-hour concentration was 4.7 ppm. This does not exceed the NAAQS

standards of 35 ppm and 9 ppm for one-hour and eight-hour levels. As such, the project "passes" the screening model.

Construction activities will cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. The impacts will be minimized by adherence to all applicable State and local regulations and to the ***FDOT Standard Specifications for Road and Bridge Construction***.

5.4.3 Noise

A Noise Study Report has been prepared for this project and is available from the FDOT District Three office. The FHWA has established Noise Abatement Criteria (NAC) for seven land use activity categories. The NAC levels are presented in **Table 5.4**. These criteria determine when an impact occurs and when consideration of noise abatement analysis is required.

Table 5.4 Noise Abatement Criteria [Hourly A-Weighted Sound Level-Decibels (dB(A))]

Activity Category	Activity $L_{eq(h)}$[1]		Evaluation Location	Description of Category
	FHWA	FDOT		
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	66	Exterior	Residential
C	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	-	-	-	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	-	-	-	Undeveloped lands that are not permitted

For the Design Year 2035 Build Alternative, noise levels are predicted to approach or exceed the NAC for Categories B (residential) and C (public institutional structures, recreational areas, trails, trail crossings, etc.). Detailed information is in *Table 3.5* of the *Noise Study Report*.

Noise abatement measures must be considered when predicted noise levels approach or exceed the NAC levels, or when a substantial noise increase occurs. A substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels on the "A" scale (dB(A)) as a result of the transportation improvement project. Because the majority of the SR 87 Connector is a new roadway, a substantial increase in traffic noise may occur. The noise sensitive sites identified along the project corridor include single family residences, a recreational trail and three institutional facilities. Activity Category F land uses such as agricultural lands, industrial facilities, maintenance facilities, and retail/commercial lands with no exterior use are also found along the SR 87 Connector. As stated in 23 CFR 772, no noise analysis is required for Activity Category F land uses. TNM was used to predict traffic noise levels at representative noise sensitive receptor sites along the project corridor. Traffic noise levels were predicted for existing conditions (2010) and the future Design Year (2035) conditions for No Build and Build Alternatives 1 and 2.

For Alternative 1, noise levels have been predicted at 57 noise sensitive receptor sites within Noise Sensitive Area (NSA) 1, NSA 2, and NSA 3 representing 59 residences and four special use areas (criminal justice facility, sheriffs training complex, juvenile residential facility, and a recreational area-BHST). For the Design Year 2035, No Build condition, noise levels are predicted to approach or exceed the NAC at two noise sensitive sites. For the Design Year 2035 Build condition, noise levels are predicted to approach or exceed the 66 dB(A) NAC at 11 noise sensitive receptor sites. In addition, a substantial noise increase (when the existing noise level is predicted to be exceeded by 15 dB(A) or more) occurred at seven receptor sites of which four also had predicted levels over the 66 dB(A) NAC. Since the Build Alternative involves noise impacts, consideration of noise abatement is warranted.

For Alternative 2, noise levels have been predicted at 83 noise sensitive receptor sites within NSA 1, NSA 2, NSA 4, and NSA 5 representing 114 residences and four special use areas (criminal justice facility, sheriffs training complex, juvenile residential facility, and a recreational area- BHST). For the Design Year 2035 No Build condition, noise levels are predicted to approach or exceed the NAC at one noise sensitive site. For the Design Year 2035 Build condition, noise levels are predicted to approach or exceed the 66 dB(A) NAC at 20 noise sensitive receptor sites. In addition, a substantial noise increase (when the existing noise level is predicted to be exceeded by 15 dB(A) or more) occurred at seven receptor sites of which four also had predicted levels over the 66 dB(A) NAC. Since the Build Alternative involves noise impacts, consideration of noise abatement is warranted. **Table 5.5** provides a summary of the Noise Analysis.

Table 5.5 Summary of Noise Impacts

Alternative	Approach or Exceed 66 dB(A)		Increase of 15 dB(A) or More	
	Residences	Recreational Trail	Residences	Recreational Trail
1	9	2	5	2
2	18	2	5	2

In accordance with 23 CFR Part 772, noise abatement measures were evaluated for the noise sensitive sites that approached or exceeded NAC. For a noise barrier to be considered feasible and cost reasonable, the following minimum conditions should be met:

- A barrier must provide an insertion loss of at least a 5 dB(A) reduction in traffic noise for at least two noise sensitive receptors to be considered benefited.
- A noise barrier must provide a noise reduction of at least 7 dB(A) for at least one impacted receptor.
- The unit cost of the noise barriers is estimated at $\$30/ft^2$. The cost for the noise barriers should not exceed $42,000 per benefited noise sensitive site. This is the upper cost limit established by FDOT. A benefited noise sensitive site is defined as a site that would experience at least a 5 dB(A) reduction as a result of providing a noise barrier.

The Florida Department of Transportation is committed to the construction of feasible and reasonable noise abatement measures at the noise-impacted locations identified in Table 3.6 and on Sheet 10 of Appendix B of the Noise Report (also summarized in Table 5.6), contingent upon the following conditions:

1. Detailed noise analyses during the final design process supports the need, feasibility, and reasonableness of providing abatement;
2. Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
3. Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and
4. Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

If, during the final design phase, abatement is no longer considered feasible or reasonable for a given location, such determination will be made prior to requesting approval for construction advertisement. Commitments regarding the exact abatement measure locations, heights, and type (or approved alternatives) will be made during the final design phase and at a time before the construction advertisement is approved. The results of the evaluation of noise abatement criteria revealed that noise barriers are not warranted anywhere along Alternative 1. Barriers were determined not to be cost reasonable based on the inability of the barriers to provide the minimum required reduction in traffic noise at a cost below the FDOT's guideline of $42,000 per benefited receptor.

Construction of a noise barrier may be reasonable and feasible for noise sensitive sites located on the western limit of Alternative 2 near the Harvest Point Subdivision. Two out of the 11 scenarios do result in a benefit of over $42,000 per site (See **Table 5.6**). Commitments regarding the exact abatement measure locations, heights, and type (or approved alternatives) will be made during the final design phase and at a time before the construction advertisement is approved.

Table 5.6 Noise Barrier Analysis – Harvest Point Area

Barrier Height (ft.) /Width (ft.)	Number of Impacted Receptor Sites	Number of Sites w/Insertion Loss of (dB(A)):						Number of Benefited Sites	Cost Per Benefited Site
		5+	6+	7+	8+	9+	10+		
8/1601	13	11	0	0	0	0	0	11	N/A
10/1401	13	1	6	3	0	0	0	10	$42,030
10/1601	13	0	8	3	0	0	0	11	$43,664
12/1401	13	6	0	4	3	3	0	16	$31,523
12/1601	13	6	0	2	6	3	0	17	$33,904
14/1401	13	4	6	1	3	3	3	20	$29,421
14/1601	13	5	5	1	2	6	3	22	$30,565
16/1601	13	4	5	2	1	1	9	22	$34,931
18/1601	13	2	7	3	1	1	10	24	$36,023
20/1601	13	6	7	2	2	1	10	28	$34,307
22/1601	13	6	6	1	3	2	10	28	$37,738

5.4.4 Wetlands

In compliance with Presidential Executive Order 11990, and using the assessment methodology, evaluation procedures, and document preparation guidance found in the FHWA's Technical Advisory T6640.8A, Title 23, Code of Federal Regulations (CFR), Part 777, and Part Two, Chapter 18 of the FDOT's PD&E Manual (revised 11/20/09), consideration has been given to the protection of wetland resources. A separate Wetland Evaluation Report (WER), dated May 2012 and updated February 2013, has been prepared for this project. The purpose of the WER is to document any potential impacts to jurisdictional wetlands and the efforts taken to avoid, minimize, and mitigate for these impacts. The WER includes a summary of the literature searches, field reviews, and mapping conducted for this project. In addition, the WER includes the assessment of the functional values of all existing wetland habitats within the study area and the coordination conducted with the US Army Corps of Engineers (USACE), FDEP, NWFWMD, USFWS, Florida Fish and Wildlife Conservation Commission (FWC), and National Marine Fisheries Service (NMFS).

Assessments of wetland and environmental resources within the project study area have been conducted. More detailed assessments appropriate for permit application submittal will be required during the design and construction phases. In order to determine the approximate locations and boundaries of existing wetland communities within the proposed alternatives, the following available site-specific data were obtained and reviewed:

- USDA-NRCS, Soil Survey Geographic (SSURGO) database for Santa Rosa County
- USFWS National Wetlands Inventory (NWI) Database
- USFWS Classification of Wetlands and Deepwater Habitats of the United States (1979)

- NWFWMD, Florida Land Use, Cover and Forms Classification System (FLUCCS) data (1995)
- FDOT FLUCCS, Level III, third ed., 1999
- Aerial photographs of the project area from 1940 and 2010
- U.S. Geological Survey (USGS) Topographic Quadrangle maps, 7.5 minute series
- Habitat and species-specific information obtained from the USFWS, the Florida Fish and Wildlife Conservation Commission (FWC), and FNAI

At the study area level, an initial desktop habitat evaluation was conducted based on photo interpretation of both historic (1940) and recent (2010) aerial photos. Data from the sources outlined above were then overlaid upon the aerial photographs and analyzed. The approximate boundaries of wetland communities were mapped on true color aerial photographs.

A more detailed review and assessment was then utilized at the corridor level, (generally 1,200 feet wide). This corridor-level analysis was further refined through field verifications and associated habitat maps (1" = 400'). Field verifications were based on delineation methods described in the USACE Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, dated 2008, and Section 62-340, FAC, "Delineation of the Landward Extent of Wetlands and Surface Waters." Whenever wetland boundaries and/or type observed in the field differed from those derived from publicly available wetland data and desktop analyses, notes were made on field maps and GPS points were logged as necessary in order to refine wetland boundaries.

The existing land use within the alternative alignments was classified using FLUCCS. The dominant existing land use in both alignments was Wetlands Forested Mix, Hardwood Coniferous-Mixed, Coniferous Plantations, and Rangeland. The acreage and percent of existing land use cover by FLUCCS category is summarized **Table 5.7**. A figure is available in **Appendix E**.

Table 5.7 Approximate FLUCCS Land Covers within Alternatives 1 and 2.

FLUCCS Code	FLUCCS Level 3 Descriptor	Alternative 1 (ACRES)	Alternative 2 (ACRES)
110	RESIDENTIAL, MEDIUM DENSITY <TWO-FIVE DWELLING UNITS PER ACRE>	0.0	1.4
120	RESIDENTIAL, MEDIUM DENSITY <TWO-FIVE DWELLING UNITS PER ACRE>	1.5	1.2
140	COMMERCIAL AND SERVICES	10.7	9.7
150	INDUSTRIAL	2.7	0.0
210	CROPLAND AND PASTURELAND	37.4	22.3
220	TREE CROPS	5.9	0.0
320	SHRUB AND BRUSHLAND	3.6	0.0
410	UPLAND CONIFEROUS FORESTS	217.1	251.1
420	UPLAND HARDWOOD FORESTS	3.6	3.6
434	HARDWOOD - CONIFEROUS MIXED	109.3	88.1

FLUCCS Code	FLUCCS Level 3 Descriptor	Alternative 1 (ACRES)	Alternative 2 (ACRES)
441	CONIFEROUS PLANTATIONS	51.0	108.6
443	FOREST REGENERATION AREAS	0.0	46.6
510	STREAMS AND WATERWAYS	6.7	6.7
610	WETLAND HARDWOOD FORESTS	14.4	12.5
630	WETLAND FORESTED MIXED	46.5	39.1
653	INTERMITTENT PONDS	4.6	4.6
631	WETLAND SHRUB	19.1	19.1
832	ELECTRICAL POWER TRANSMISSION LINES	55.8	55.8

Wetland lines were flagged in the field and FNAI classifications were assigned to each wetland polygon within each proposed alternative and were then revised in GIS (ArcMapTM 9.2/9.3) as necessary. Field reconnaissance events occurred in September 2011 and January 2012. It should be noted **Table 5.7** was updated in March 2013, with the most up to date alignment locations and field information.

Wetland classifications were based on FNAI, NWI, and FLUCCS classification schemes. Please reference the FNAI, NWI, and FLUCCS classification schemes in the WER. Natural wetland systems within the study area include wet prairie / seepage slopes, basin swamps, dome swamps, and bottomland forests. Please refer to the WER for the location of these wetland systems.

The delineated jurisdictional wetlands were classified according to the NWI/ Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979) (**Appendix E**). The acreage of each wetland classified by NWI is shown in **Table 5.8**. Wetland habitats were classified using the Florida Natural Areas Inventory (FNAI, 2009) (**Table 5.9**). The wetland habitats were also classified according to FLUCCS (see **Table 5.7**). Maps depicting delineated wetlands and NWI classification are shown in **Appendix E**.

Table 5.8 Wetlands Classification Based on NWI / Cowardin

NWI / Cowardin Classification	Alternative 1 (Acres)	Alternative 2 (Acres)
PF01/2F, Freshwater Forested/ Shrub Wetland	5.8	5.8
PF01F, Freshwater Forested/ Shrub Wetland	4.8	4.8
PF03C, Freshwater Forested/ Shrub Wetland	0.8	0.8
PF04/1B, Freshwater Forested/ Shrub Wetland	7.0	7.0
PSS1C, Freshwater Forested/ Shrub Wetland	0.4	0.5
PSS1F, Freshwater Forested/ Shrub Wetland	0.7	0.0
PF02/1F, Freshwater Forested/ Shrub Wetland	2.8	0.0
PF01/4C, Freshwater Forested/ Shrub Wetland	10.9	10.9
PF01C, Freshwater Forested/ Shrub Wetland	5.5	5.5
PF03/1C, Freshwater Forested/ Shrub Wetland	5.9	5.9
PSS1/3C, Freshwater Forested/ Shrub Wetland	0.6	0.6
PUBF, Freshwater Pond	0.3	0.3
R2UBH, Riverine	0.7	0.7

Table 5.9 Wetlands Classification Based on FNAI

FNAI Classification	Alternative 1 (Acres)	Alternative 2 (Acres)
Seepage Slope	23.48	23.23
Basin Swamp	10.28	10.28
Dome Swamp	1.43	0
Bottomland Forest	21.66	21.66

The alternatives derived from corridor studies were analyzed via the same desktop and field truthing procedures outlined above and in the WER. Wetland quality associated with alternative alignments was also assessed within each unique wetland habitat polygon using the Uniform Mitigation Assessment Method (UMAM) as defined in Chapter 62- 345, F.A.C. This wetland assessment methodology has replaced the Wetland Rapid Assessment Procedure (WRAP). UMAM is the methodology of wetland quality assessment that is currently accepted by the State of Florida agencies (including FDEP and NWFWMD). This methodology was established by the Florida Administrative Code, Chapter 62-345, and was adopted in 2004 and amended in September 2007. The methodology allows an assessment of wetland quality that is both qualitative and quantitative. The first part provides a qualitative characterization of an assessment area. The second part is a quantification of the assessment area with scoring established based on wetland functional values involving an evaluation of wetland conditions. Three criteria are scored: Location and Landscape Support, Water Environment, and Community Structure. Scoring is numeric in whole numbers on a 0 – 10 basis, with a narrative provided to support the scoring.

Scoring is based on current condition, but the methodology provides additional scores for future impacts (with the project implemented) or future enhancements (with mitigation implemented). The difference between the current and future scenario is calculated then incorporated with additional factors such as time lag and risk. Time lag ranges from 1 – 3.91 and is based on the time difference between wetland functions lost as a result of impact and the replacement through mitigation. Risk is the mitigation vulnerability of hydrology, plant community, water quality, secondary impact, and invasive exotics and is a scale of 1 – 3 with 0.25 increments. Two key concepts are functional loss, which is the measure of wetland functions that are lost by impact, and functional gain, which is the measure of wetland functions gained through mitigation after adjustments for preservation, time lag, and risk. Functional gain would be greater than functional loss to provide the "no-net-loss" of wetland function. UMAM is currently accepted as the wetland assessment methodology of the FDEP, NWFWMD, and the Jacksonville District of the USACOE via a Public Notice dated August 18, 2005. Maps indicating the specific polygon location and NWI classification are included in **Appendix E**.

Wetland Impacts

1. Seepage Slope / Wet Prairie (FLUCFCS #643 – Wet Prairie/Pine Savanna)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 23.48 acres
Alternative 2 = 23.23 acres

Seepage slopes are on landscapes where the downward movement of ground water is redirected laterally by less permeable layers in the soil, such as increased clay content or spodic horizons, and water flows at or near the ground surface saturating the soils. Many endemic and imperiled herbaceous plant species are associated with seepage slopes since large areas of this community have been converted to pine plantations and are susceptible to alteration by fire-suppressed growth of woody species. The majority of the seepage slope / wet prairie within the alignments is fire suppressed and dominated by black titi (*Cliftonia monophylla*), white titi *(Cyrilla racemiflora),* and galberry (*Ilex* glabra). In areas that have been mowed, such as the power line easements, greater plant diversity was observed.

2. Basin Swamp (FLUCFCS *#617 – Mixed Wetland Hardwoods)*
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 10.28 acres
Alternative 2 = 10.28 acres
Basin Swamps are wetland plant communities characterized by long periods of inundation punctuated by dry periods. These areas are depressions in a relatively flat landscape and are dominated by a variety of canopy, subcanopy, and shrub species such as black titi *(Cliftonia monophylla),* pond cypress (*Taxodium ascendens*), swamp bay (*Persea palustris*), swamp tupelo (*Nyssa biflora*), sweetbay magnolia (*Magnolia virginiana*) and slash pine (*Pinus elliottii*). The basin swamps within the alignments are fire suppressed. The groundcover coverage is sparse and diversity is low, which is likely a result of intense competition with woody species.

3. Dome Swamp (FLUCFCS #630 – Mixed Wetland Hardwoods)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 1.43 acres
Alternative 2 = 0.0 acres
Dome Swamps are wetland plant communities characterized by long periods of inundation and occur in depressions in the landscape that may or may not be associated with other types of wetland systems (they may be isolated systems). Dome swamps typically have a partially or entirely closed canopy of cypress, black gum and sweet bay, which also characterizes the dome swamps in the alignments. The subcanopy consists of cypress, sweet bay, swamp tupelo, and red maple (*Acer rubrum*). The Dome Swamps contain a thick woody shrub understory of St. John's wort (*Hypericum chapmanii*), titi, myrtle leaf holly (*Ilex myrtifolia*), and fetterbush (*Lyonia lucida*).

4. Bottomland Forest (FLUCFCS #615 – Bottom; and Stream & Lake)
(NWI Classification – 1) Palustrine, Freshwater Forested/Shrub Wetland & 2) Riverine)
Alternative 1 = 21.66 acres
Alternative 2 = 21.66 acres
Bottomland Forests are wetland plant communities that are typically contiguous with riverine communities. Bottomland forests are seasonally flooded and influenced by precipitation. Bottomland forests have closed canopies and a mixture of evergreen and deciduous trees in the canopy. The bottomland forest in the alignments surrounds

both the Blackwater River and Clear Creek, which are both blackwater streams that drain into the Pensacola Bay.

Direct and Shading Impacts

State and Federal agencies may exert jurisdiction over all wetland areas located within the alignments. Direct wetland impacts and impacts from shading will require permits from both agencies and mitigation will likely be required for the direct impacts. The State and Federal agencies use UMAM to determine the amount of mitigation required to offset impacts to wetlands and other surface waters.

The FNAI classification of wetland habitats was used for evaluating potential wetland impacts in the proposed alignment areas. The impacts were evaluated by comparing the current condition of each FNAI wetland habitat with the condition of a restored FNAI wetland habitat at a reference site. The condition of the restored habitat at the reference site indicates that the appropriate landscape treatments are being applied to the alignments, the appropriate surrounding land uses are present, and that there is an appropriate mix of flora and fauna.

The wetlands in the alignments are medium/high quality wetlands, based on the UMAM scoring procedure, since most wetland habitats resembled the reference condition. Anomalies exist where power lines have been constructed through wetlands, where silvicultural activities are conducted, and adjacent to development. In these disturbed areas, the wetland vegetation has either been mowed or the vegetation is fire suppressed and the appropriate ground cover species are not present.

UMAM Explanation

Location and Landscape

The pre-project location and landscape scores for the alignments ranged from Moderate (7) to Optimal (9) in the current condition due to the following factors: the location of the alignments and overall landscape; connectivity to the Blackwater River and Clear Creek; the relatively un-developed surrounding land use with a variety of natural conditions and connectivity; and a lack of significant barriers to wildlife movement. In the post-project condition, the wetlands proposed for direct impact have been scored "0" while those wetlands affected by indirect impacts, or shading due to bridges such as the floodplain of the Blackwater River, have been reduced by "2" points from the pre-project scores.

Water Environment

In general, the existing wetland hydrology supports the natural communities and no significant alternation in hydroperiods from historic patterns was documented. The impacts to hydrology are directly associated with adjacent silviculture and agriculture, primarily ditching and furrowing. Most of these effects are less pronounced within the floodplains of the Blackwater River. Some minor hydrologic impacts may be associated with roadways and power lines. The current conditions scores are in the optimal range and the direct impacts have been scored "0". There

were no with project score decreases for the water environment UMAM parameter as a result of proposed shading and bridge construction.

Vegetation Structure

The principal components of the structure variable in this environment are: appropriate species; appropriate diversity and distribution of these species; appropriate vertical structure (i.e., canopy and groundcover); and the ability of the vegetation to carry and withstand a fire. Most of the wetlands within the alignments have been maintained in their appropriate conditions and current condition scores are in the optimal range (from 8 to 10) based upon the degree of vegetative alteration from fire suppression and/or typical disturbance regimes such as fallen trees from storms. Highly altered areas, such as those within the power lines and adjacent to agricultural areas received moderate scores. In the post-project scoring, the areas proposed for direct impact have been scored a "0" while those areas being shaded have been reduced by "1" or "2" points based on the type of vegetation located beneath the proposed roadway.

The UMAM polygon scores are included in **Tables 5.10** and **5.11**, and the full Part 1 and Part 2 UMAM polygon evaluation sheets are provided in **Appendix E**.

UMAM Summary

Alternative 1 traverses more wetland areas than Alternative 2. The following summary **Tables 5.10** and **5.11** provide a matrix which summarizes the wetland impact analyses for both Alternatives 1 and 2. Each matrix includes the polygon name, wetland classifications (based on FNAI and FLUCFCS), acreage, polygon score, and functional loss for alignment alternatives 1 and 2, respectively. The No-Build alternative would not result in any wetland impacts. Please refer to the WER for the location of these wetland boundaries as illustrated in **Figure 5.3**. Maps indicating the specific polygon location and NWI classification are included in **Appendix E**.

It has been determined that there are no practical alternatives to construction in wetlands if any of the build alternatives are chosen as the recommended alternative. All practicable measures will be used to reduce impacts to wetlands during subsequent project phases. Short-term construction-related impacts will be minimized by the adherence to the FDOT's Standard Specifications for Road and Bridge Construction.

Table 5.10 Alternative 1 UMAM Summary Table

Alignment 1 UMAM Summary Table

Polygon #	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID	Location & Landscape Support		Water Environment		Community Structure/Vegetation		Assessment Score	Area (ac)	Functional Loss Unit(s)
				Without	With Project	Without	With	Without	With			
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	9	0	0.93	2.95	2.75
1	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	4.55	3.34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	8.14	5.97
12	Permanent-Dredge or Fill	Dome Swamp	630-Mixed Forested Wetland	9	0	9	0	8	0	0.87	1.43	1.24
13	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	6	0	7	0	6	0	0.63	0.25	0.16
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	79.33	18.51
										Total Functional Loss Units>		**53.25**

Acreage Totals	
Direct Impacts	34.64
Shading Impacts	22.38
Indirect Impacts	139.40
Total Wetlands	196.42

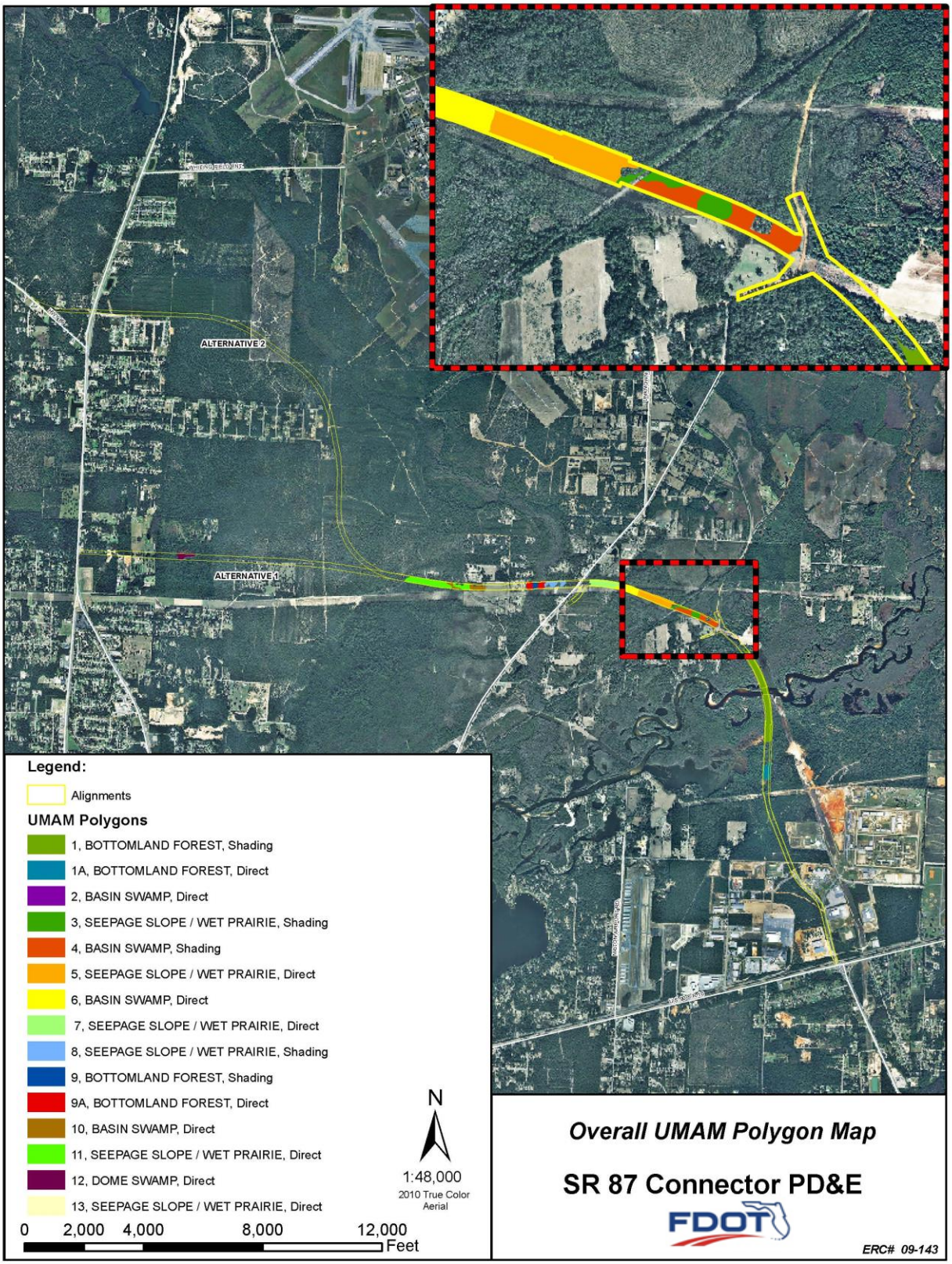
Table 5.11 Alternative 2 UMAM Summary Table

Alignment 2 UMAM Summary Table

Polygon #	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID	Location & Landscape Support		Water Environment		Community Structure/Vegetation		Assessment Score	Area (ac)	Functional Loss Unit(s)
				Without	With Project	Without	With	Without	With			
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	0	10	0	9	0	0.93	2.95	2.75
1	Shading	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	4.55	3.34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom; and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	8.14	5.97
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	73.94	17.25
										Total Functional Loss Units>		**50.60**

Acreage Totals	
Direct Impacts	30.62
Shading Impacts	22.38
Indirect Impacts	134.01
Total Wetlands	187.01

Figure 5.3: UMAM Polygon Map



There are approximately 57 acres of wetlands within the Alternative 1 alignment and approximately 56 acres of wetlands within the Alternative 2 alignment. Approximately 35 acres of wetlands within alignment 1 and 31 acres of wetlands within alignment 2 are proposed for direct impact. Approximately, 22 acres are potentially proposed for shading impacts in both alignments. There are approximately an additional 140 and 134 acres of indirect and cumulative impacts for Alternative 1 and Alternative 2, respectively. Wetland impacts have been avoided and minimized to the maximum extent practicable through the use of stormwater collection methods, maintenance of pre and post hydrologic flow between wetlands and streams, and by bridging the high quality, sensitive wetlands associated with the Blackwater River, Clear Creek, and reticulated flatwoods salamander critical habitat. The original wetland impact acreage was calculated after the initial wetland delineation in September 2011 and resulted in 129 acres of potential wetland impact. Based on the alignment revisions, the current potential direct wetland impact for Alternative 1 is 57 acres (+/-) and Alternative 2 is 53 acres (+/-).

Both alignment alternatives will impact wetlands. The impacts and functional UMAM loss are summarized in the **Table 5.12**:

Table 5.12 Impacts and Functional UMAM Loss

Criteria	Alignment 1	Alignment 2
Direct Impact	34.64 Acres	30.62 Acres
Shading Impact	22.38 Acres	22.38 Acres
Indirect and Cumulative Impacts	139.40 Acres	134.01 Acres
Functional Loss (UMAM)	53.25 Units	50.60 Units

Minimization efforts include:

- *Bridges And Stormwater Treatment* - In order to minimize direct, indirect, and long-term impacts, Blackwater River's entire floodplain area will be bridged. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The bridge over the Blackwater River will be 5,570 feet long, 99 feet wide (in two separate sections – 56 feet wide and 43 feet wide), and 28.25 feet above the ground. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

  In order to minimize direct, indirect, and long-term impacts, the open water portion of Clear Creek and a portion of its floodplain will be bridged (based on results of the Bridge Hydraulics Report completed in 2012). The primary goal of the bridge is to reduce upstream flooding and to allow the creek to flow unobstructed to receiving waterbodies. Bridging the entire floodplain is not feasible since the length of the bridge over the Blackwater River and the RFS critical habitat unit significantly increased in length resulting in an increase in

overall projected construction costs. The bridge over Clear Creek will be 180 feet long, 99 feet wide (in two separate sections), and 20.7 feet above the ground. The canopy and some shrubs will be impacted long term by the bridges and groundcover will be impacted during construction. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

- *Construction Methodology* - During construction, wetlands outside of the limits of construction will be protected from impacts using standard construction Best Management Practices (BMPs). Bridge construction will occur from retaining wall to retaining wall to prevent sediment deposition within floodplains and stream systems.

- *Hydrological Connections* - Connections and hydrological flows between wetland systems will be maintained by using culverts to connect wetlands that may be bisected by the proposed alternatives. The use of culverts will ensure post-project flow regimes similar to the current condition and will prevent flooding, which will help to maintain wetland hydroperiod and function.

- *Threatened And Endangered Plant And Animal Species* - No Federally listed wildlife species or plant species were observed during the field survey. The only State listed animal species observed was the gopher tortoise; however, this species is not wetland dependent. FDOT will commit to pre-construction surveys and will coordinate with the FWC during design/build phase of the SR 87 Connector project. Although not observed during the field survey, both alignments are located within designated critical habitat for the reticulated flatwoods salamander. In order to minimize impacts to wetlands that serve as potential breeding habitat for the RFS, the proposed roadway alignment was shifted to roughly parallel the power line easement on the southernmost edge of the critical habitat unit, which is already a disturbed linear feature traversing this area. In an effort to minimize direct impact to the wetlands, all of the wetland area traversed by the alternatives will be bridged. The bridge through the critical habitat is a continuation of the bridge over the Blackwater River, 99 feet wide (in two separate sections), and 28.25 feet above the ground. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

<u>Permitting and Mitigation Efforts include:</u>

Permitting will be required for direct and indirect wetland impacts by the regulatory agencies with jurisdiction, primarily USACE and FDEP. The State and Federal agencies will exert jurisdiction over the wetlands and waters delineated within the alignment areas. Coordination with the regulatory agencies will continue through the design phase to evaluate permitting and mitigation requirements. The project is anticipated to require an Environmental Resource Permit (ERP) from the FDEP since Sovereign Submerged Lands are involved, and a Section 404 dredge and fill individual permit from the USACE. This project will also require a National Pollution Discharge Elimination System (NPDES) permit from the U.S.

Environmental Protection Agency (EPA) since one or more acres of land are proposed to be filled. The FDOT will coordinate with the FDEP, USACOE, EPA, National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS), and the Florida Fish and Wildlife Conservation Commission (FFWCC) regarding potential impacts to wetlands and wildlife species.

Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S. to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 U.S.C.s.1344. Compensatory mitigation for this project will be completed through the use of mitigation banks and any other mitigation options that satisfy state and federal requirements.

Mitigation will be required for direct, as well as some indirect (as deemed necessary by FHWA, FDOT, USACOE, NWFWMD, and other appropriate resource agencies) wetland impacts. Alternative 1 results in a functional loss of 53.17 units and Alternative 2 results in a functional loss of 50.32 units, which includes indirect and cumulative impacts. At this point in the project development, FDOT is not prepared to state how impacts to wetlands will be mitigated due to the varying types of resources that could be impacted. The degree, type, and location of mitigation that will be required will not be determined until permitting requirements for the recommended alternative are evaluated. The FDOT will reserve use of statute approved mitigation (F.S. Section 373.4137), mitigation banks located near the proposed project, or property donations once the efficiency and value of the mitigation options have been calculated.

In many cases involving FDOT projects, wetland impacts are mitigated by purchasing mitigation credits from the NWFWMD via the Northwest Florida Umbrella, Watershed-based, Regional Mitigation Plan or “Umbrella Plan". The Umbrella Plan was established in 2006 by an agreement between NWFWMD and the USACOE (Jacksonville District). Operated as an in-lieu fee program, the Umbrella Plan is an outgrowth of the NWFWMD’s responsibility under Florida Statutes to provide mitigation for FDOT impacts to wetlands regulated by federal and state code. The NWFWMD jurisdiction covers seven major riverine watersheds, 16 counties, and extends from east of Tallahassee to west of Pensacola. With the Umbrella Plan, watershed resources and mitigation needs are identified up front in a comprehensive manner. The Umbrella Plan establishes a process by which wetland mitigation projects are strategically identified at a watershed scale, evaluated, and approved by consensus of the USACOE-led Interagency Review Team. Using a mitigation credit ledger, credits may be used to offset future wetland impacts such as those potentially stemming from the SR 87 Connector PD&E project.

One option for mitigation is the Pensacola Bay Mitigation Bank (PBMB), a 1,200 acre site located in Santa Rosa County that offers hardwood, pine flatwoods, and herbaceous wetlands credits. The PBMB was permitted using UMAM and as “like-for-like” credits available to offset potential alignment impacts. At the time of document preparation, credits for the PBMB were priced between $25,000 and $50,000 per credit and there were approximately 25 credits available for purchase.

The restoration activities that are required to obtain credit release are continuing on the PBMB and it is anticipated that additional credits may be available as the project moves into the design and construction phases. The Interagency Review Team (IRT) will evaluate the available options to determine the most suitable mitigation during the permitting of the proposed alignment impacts.

5.4.5 Water Quality

It has been estimated that the degree of effect from the SR 87 Connector project on water quality and quantity will be substantial. This is mostly due to the undeveloped nature of the corridor. The majority of the corridor is designated timberland.

The US Environmental Protection Agency (USEPA) as part of their review of the project stated that protecting water resources such as surface water quality is a priority of federal and state environmental agencies. Primary sources of surface water quality impairment include point and non-point sources. A primary concern regarding water quality for the proposed project is the impact to surface water quality as a result of stormwater runoff into nearby surface water bodies. Stormwater runoff from the roadway would directly affect Blackwater River and other surface water bodies (such as Clear Creek); therefore runoff will be collected and treated prior to discharging to these water bodies.

The proposed stormwater facility design will include all design criteria outlined in the Santa Rosa County Land Development Code, Section 4.03.06 (F), Chapter 62-346 of the F.A.C and NWFWMD's ERP Applicant's Handbook Volume II, Chapters 5.2 and 8.2. Both alternatives traverse through areas which drain to an OFW. Due to the proposed impact to the OFW, the FDEP/NWFWMD requires that an additional 50% treatment volume be provided in these areas. The stormwater management facilities were preliminarily designed to include this additional 50%, even in areas that do not directly discharge to Blackwater River.

The proposed stormwater facility will have two conveyance systems: stormsewer pipe and roadside ditches. The urban typical section will utilize stormsewer pipe to direct the runoff from the roadway to the proposed stormwater ponds. The runoff from the rural typical section will collect in roadside ditches which will drain to the ponds. All the proposed stormwater ponds will discharge to natural low areas to preserve necessary water quantity. In addition, wetland connectivity will be preserved with cross drains under the proposed highway facility.

5.4.6 Outstanding Florida Waters

Chapter 62-302.700 F.A.C. prevents the degradation of water quality in OFWs and Outstanding National Resource Waters (ONRW). Subsections (9) and (10) of Chapter 62-302.700 F.A.C. provides a listing of all OFWs, including waters in the State Park System and waters in State Preserves. A review of Chapter 62-302.700 F.A.C. indicates that the Blackwater River is an OFW.

Both alternatives cross the Blackwater River and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the entire floodway will be bridged. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

5.4.7 Contamination

In accordance with the FDOT PD&E Manual Part 2, Chapter 22, a Contamination Screening Evaluation Report (CSER) was conducted for this project. *"The State of Florida has evaluated the proposed right-of-way and has identified potentially contaminated sites for the various proposed alternatives. Results of this evaluation will be utilized in the selection of a recommended alternative. When a specific alternative is selected for implementation, a site assessment will be performed to the degree necessary to determine levels of contamination and, if necessary, evaluate the options to remediate along with the associated costs. Resolution of problems associated with contamination will be coordinated with appropriate regulatory agencies and, prior to right-of-way acquisition, appropriate action will be taken, where applicable."*

The sand-and-gravel aquifer system is the primary source of the large underground supply of fresh water in Santa Rosa County. This aquifer consists of several hundred feet of unconsolidated quartz sand and gravel that serves as a reservoir for the water that percolates into the ground. The water in the sand-and-gravel aquifer is considered to be some of the softest and least mineralized ground water in the state. The generally low mineralization of the ground water in this region results from the fact that the sand-and-gravel aquifer consists primarily of relatively insoluble quartz. Given the rather high average porosity and permeability of the sand-and-gravel aquifer, ground water recharge is accomplished through rainfall. This results in contaminated surface water being a primary concern for the sand-and-gravel aquifer. The alternatives pass through two main drainage basins: the Blackwater River basin and the Clear Creek basin.

Considering the general directional movement of surface water in the area as well as the permeability characteristics of the sand-and-gravel aquifer, it is reasonable to expect directional migration of potential contamination to generally coincide with surface water movement. Localized surface water and ground water directionality can vary over short distances, but it should be anticipated that surface water and ground water found in the sand-and-gravel aquifer will generally move from upper elevations to lower elevations, thus, possible contamination migration may also be anticipated to move down gradient towards Blackwater River or Clear Creek.

A total of twelve (12) sites (See **Figure 5.4**) were identified as being potential sources of contamination at the proposed alignment for both alternatives. Sites 1-6 are found in the southeast portion of the project limits near the SR 87/US 90 intersection and Sites 7-12 are found in the northwest portion of the project limits near the SR 87 (Stewart Street) and SR 89 (Dogwood Drive) intersection. It should be noted that Whiting Field NAS was included in the original July 2010 SR 87 Connector CSER, but was removed when Alternative #3 was dropped. It is now not a concern for the project due the location of contamination being greater than one (1) mile away from the remaining alternatives.

1. The Santa Rosa Brownfield Redevelopment Area is 655 acres and encompasses all of the Santa Rosa Industrial Park. Both Alternatives 1 and 2 are proposed to traverse through this Brownfield. It has been assigned a ranking of **MEDIUM** for potential environmental impact.

2. Santa Rosa Correctional Institute (located within the Santa Rosa Brownfield Redevelopment Area); Aboveground Storage Tank (AST), Hazardous Waste Generator (RCRIS). It has been assigned a ranking of **MEDIUM** for potential environmental impact.

3. Santa Rosa County Sheriff's Office (located within the Santa Rosa Brownfield Redevelopment Area); AST. It has been assigned a ranking of **MEDIUM** for potential environmental impact.

4. HT Hackney Panhandle Fueling Facility (located within the Santa Rosa Brownfield Redevelopment Area); Underground Storage Tank (UST). It has been assigned a ranking of **MEDIUM** for potential environmental impact.

5. (Former) G&D Tires, Inc., 8401 Highway 90, Milton, FL 32583.
   G&D Tires was a waste tire processing facility that is now closed with no ground water monitoring and has no known history of active contamination. However, due to the site's history as a tire disposal facility and its immediate proximity to the alternatives, it has been assigned a rating of **MEDIUM** for potential environmental impact.

6. (Former) C&J Tires, Inc., 8401 Highway 90, Milton, FL 32583.
   A discharge of an unknown amount of leaded gas and unleaded gas was reported June of 1996. Upon closing of the station, three UST's were removed and the site was issued a Site Rehabilitation Completion Order (SRCO) in April 2002. Due to the site's known history of contamination and immediate proximity to the alternatives, it has been assigned a rating of **MEDIUM** for potential environmental impact.

7. & 8. (Former) Kembro C&D Debris Landfill / (Former) Rowley C&D Debris Landfill, West Dixie Road and Kembro Road, Milton, FL 32570.

These sites were located near the intersection of West Dixie Road and Kembro Road approximately 0.6 miles southwest of where Alternative 1 intersects with SR 87 north of Milton, FL. Because this location is greater than 0.5 miles away from the alternatives and is "down gradient" from them, both of these sites have been assigned a rating of **LOW** for potential environmental impact.

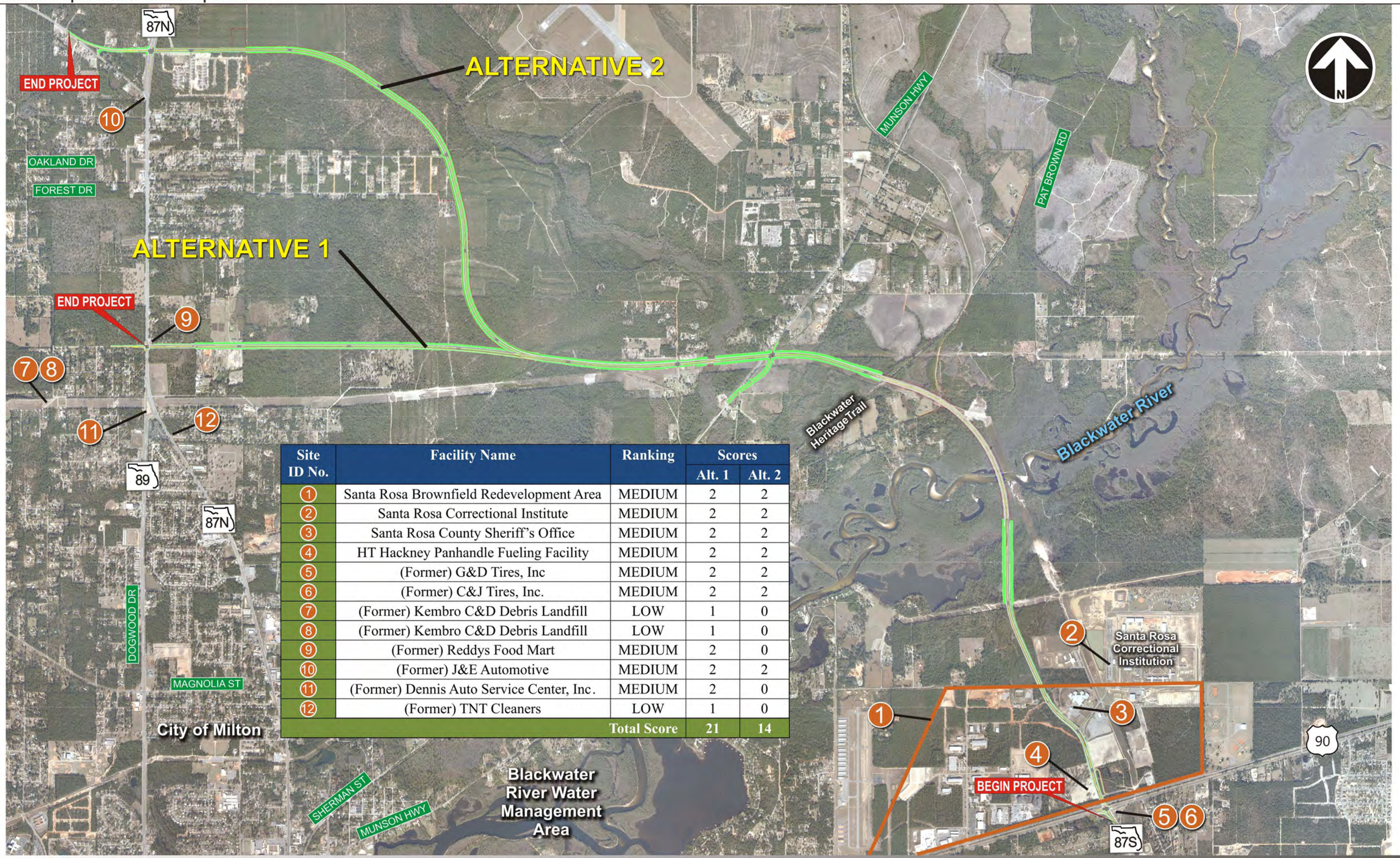
9. (Former) Reddys Food Mart, 6500 Highway 87, Milton, FL 32570.
   A petroleum discharge report was filed in February 2006 and the site was initially assigned an SSRCO. However, in August 2011 the site was re-designated to a status of "Cleanup Not Required." Due to the site's history of petroleum discharge, and immediate proximity to the proposed Alternative 1, it has been assigned a rating of **MEDIUM** for potential environmental impact.

10. (Former) J&E Automotive, 7005 Highway 87 North, Milton, FL 32570.
    A discharge consisting of tetrachloroethene (PCE) and used oil was discovered in October 2007. Cleanup was required and the site received an SRCO in July 2010. Due to the site's history of petroleum discharge, and close proximity to the proposed Alternative 2, it has been assigned a rating of **MEDIUM** for potential environmental impact.

11. (Former) Dennis Auto Service Center, Inc., 2883 Stewart Street, Milton, FL 32570.
    The facility is now closed. A discharge of leaded and unleaded gas was reported at this location in December 1988. Cleanup was required of the discharge and an SRCO was issued in April 2000. Due to the site's known contamination and close proximity to the proposed Alternative 1, it has been assigned a rating of **MEDIUM** for potential environmental impact.

12. (Former) TNT Cleaners, 6294 Stewart Street, Milton, FL 32570.
    The drycleaner is now closed. There are no known incidents of contamination from this site. Therefore, it has been assigned a rating of **LOW** for potential environmental impact.

A weighted rating system was then developed to assess the potential for contamination impact from the alternatives. The weighted rating system utilizes a scoring system of 0 to 3, with 0 being "No Expected Impact", 1 being "Least Impact", and 3 being "Highest Impact" for each potential source of contamination. Alternative 1 was given a score of 21 and Alternative 2 was given a score of 14. **Figure 5.4** provides a summary of the evaluation of the two project alternatives.



Site ID No.	Facility Name	Ranking	Scores	
			Alt. 1	Alt. 2
1	Santa Rosa Brownfield Redevelopment Area	MEDIUM	2	2
2	Santa Rosa Correctional Institute	MEDIUM	2	2
3	Santa Rosa County Sheriff's Office	MEDIUM	2	2
4	HT Hackney Panhandle Fueling Facility	MEDIUM	2	2
5	(Former) G&D Tires, Inc	MEDIUM	2	2
6	(Former) C&J Tires, Inc.	MEDIUM	2	2
7	(Former) Kembro C&D Debris Landfill	LOW	1	0
8	(Former) Kembro C&D Debris Landfill	LOW	1	0
9	(Former) Reddys Food Mart	MEDIUM	2	0
10	(Former) J&E Automotive	MEDIUM	2	2
11	(Former) Dennis Auto Service Center, Inc.	MEDIUM	2	0
12	(Former) TNT Cleaners	LOW	1	0
		Total Score	21	14

5.4.8 Floodplains

The proposed alternatives cross over floodplains in multiple locations, including the regulatory floodplain of Blackwater River. Flood heights associated with the bridges is minimal due to the fact that the floodplain has transverse encroachments and the Blackwater River Bridge spans the entire floodway. The proposed bridge will be designed having a length and vertical clearance to provide hydraulic conveyance of storm events affecting the Blackwater River. The bridge will also provide vertical and horizontal clearances required for small recreational vessel navigation at the Blackwater River channel as well as trail users on the Blackwater State Heritage Trail. The bridges over the Blackwater River and Clear Creek will provide no less than six feet of clearance above the mean high water elevation. This is the minimum requirement for navigational purposes outlined in FDOT's Plans Preparation Manual. Longitudinal encroachments were avoided by configuring the alignments perpendicular to the stream/river crossings. This project is not considered to have significant encroachments because the encroachments do not have a high probability of loss of human life, will not likely cause future damage that could be substantial in cost or extent, and will not cause adverse impact on natural and beneficial floodplain values. Where the proposed facilities have floodplain impacts, they are evaluated and documented in the Location Hydraulics Report in accordance with Chapter 24 of the PD&E Manual.

Within the limits of the Blackwater River floodplain, the existing ground elevations are between -5.3 feet and 51.8 feet, and the proposed ground/bridge deck elevations are between 30.7 feet and 64.0 feet. The base flood elevation is 19 feet on the south end of the proposed Blackwater River Bridge and is 20 feet on the north end. The existing ground elevations within the Clear Creek floodplain fluctuate from 5.7 feet to 19.9 feet, and the proposed ground/bridge deck elevations vary from 23.2 feet to 34.2 feet. Throughout the remainder of the project (in Flood Zone X), existing ground elevations range from 10.0 feet to 179.0 feet, and the proposed roadway profile grade elevations from 19.2 feet to 179.0 feet.

Mitigation is required for impacts to the floodplain. Floodplain compensation will be provided by excavating (dredging) a portion of "uplands" just upstream of the proposed Blackwater River Bridge. This area will serve as a locale for additional flooding along the river bank and will assist with rise in base flood elevations at the proposed highway facility. Flood maps shall be revised to include the floodplain compensation area as part of the base flood. It should be noted that FEMA is currently in the process of updating flood maps in the study area, and preliminary design documents may require adjustment to account for changes to the floodplain and floodway, if any.

Ultimate discharge points for offsite runoff in each existing drainage basin will not be significantly modified. Blackwater River surface elevations may have a slight increase in elevations at the proposed cross drains (for offsite runoff to by-pass under the proposed roadway). In addition, runoff from the proposed roadway basins will be collected and treated in retention ponds prior to discharging to natural low areas

and/or wetlands. As a result, there will be minimal impacts on natural and beneficial floodplain values. There will also be minimal change in flood risk, and there will be an improvement for providing emergency service or emergency evacuation routes in the project vicinity.

Floodplain Statement:
This project provides a new roadway with potential significant changes in the 100 year flood elevations. The following statement, taken from the Location Hydraulics Report, summarizes the overall encroachments this project will have with regards to the floodplain:

"The construction of the drainage structure(s) proposed for this project will cause changes in flood state and flood limits. These changes will not result in any significant adverse impacts on the natural and beneficial floodplain values or any significant changes in flood risk or damage. These changes are currently being reviewed by the appropriate regulatory authorities who have concurred with the determination that there will be no significant impacts. There will not be significant change in the potential for interruption, or termination, of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant."

The recommended pond sites were chosen based on numerous factors: ground water table height, soil permeability, profile grade, pre-development outfall locations, minimizing wetland impacts, avoiding floodplains, parcel owners, minimizing distance to pipe runoff to each pond, and avoidance of threatened and endangered species and cultural resources. The off-site pond locations were also determined based on allowable hydraulics and headloss (how far stormwater could be piped). There are areas close to the Blackwater River where some potential pond sites are within the floodplain. These ponds are wet ponds which will require berms (some embankment) and ultimately would affect the floodplain. However, the project design proposes to provide floodplain compensation upstream of these areas to help alleviate any potential staging due to the fill related to the entire project. Detailed information on these pond sites can be found in the Pond Siting Report.

5.4.9 Coastal Zone Consistency

In accordance with Section 307 of the Coastal Zone Management Act (CZMA) and Chapter 15, CFR, Part 930, Federal Consistency with Approved Coastal Management Programs, this project was reviewed for Coastal Zone Consistency. As documented in the Advance Notification (AN) process, the Florida State Clearinghouse, FDEP Office of Intergovernmental Affairs, commented that the State of Florida had no formal objections to the use of federal funding for the SR 87 Connector project, and the project was therefore consistent with the Florida Coastal Management Program (FCMP). However, the consistency determination was based on the project having addressed the concerns of the state reviewing agencies. The continued concurrence with Coastal Zone Consistency is based on the "adequate resolution of issues" as

identified during the review process. Final concurrence of Coastal Zone Consistency will be determined during the Environmental Permitting Process. A copy of the response is available in **Appendix B, ETDM Summary Report, page 4**.

5.4.10 Wildlife and Habitat

This project has been evaluated for potential impacts to threatened and endangered species in accordance with Section 7(c) of the Endangered Species Act of 1973 and by Chapter 68A-27, F.A.C. An Endangered Species Biological Assessment (ESBA) Report, dated September 5, 2012 has been prepared for the project and was submitted to the USFWS for their review and concurrence of effect determination. A separate Biological Assessment, dated March 2013, was prepared as part of ESA Section 7 Formal Consultation and also submitted to USFWS. Under Section 7, federal agencies must consult with USFWS when an agency action may affect a listed or endangered species. If it is determined the action will likely adversely affect a listed species, the agency submits to USFWS a request for formal consultation. During the informal review of this project, it was determined that formal consultation should be requested for possible impacts to the Gulf sturgeon and the reticulated flatwoods salamander. During the formal consultation process, our project team and USFWS shared information about the project and the likely impacted species. USFWS followed this with the preparation of a Biological Opinion on whether this project will jeopardize the continued existence of these species. (**Appendix A Correspondence, Appendix I, Biological Opinion/Formal Consultation Responses**).

The T&E species survey was performed by the project team using standard biological survey methods. These methods included a combination of interpreting aerial photos and soils maps, reviewing state maintained location records, and conducting exhaustive on-site field investigations. Aerial photographs and soil surveys provide useful predictive information based on the historic and current conditions of a particular landscape - this is especially helpful when the site has been altered. When this information is combined with known location records for T&E species, and a careful examination of the current botanical structure of the site, ecologists with specific knowledge of local flora and fauna can effectively predict the taxa likely to occur. Accordingly, target-specific search strategies can be designed to ensure that an effective survey is conducted.

A list of potentially occurring T&E species was prepared for the SR 87 Connector project and is included as **Table 4.2**. This list included a review of known T&E species occurrences based upon Florida Natural Areas Inventory (FNAI) and the following:

- USFWS Species List for Santa Rosa County
- USFWS Critical Habitat Mapper http://criticalhabitat.fws.gov/crithab/
- USFWS National Wetland Inventory (NWI) Database

- NMFS Essential Fish Habitat Mapper: http://www.habitat.noaa.gov/protection/efh/habitatmapper.html
- U.S. Department of Agriculture (USDA), NRCS Soil Survey Santa Rosa County
- U.S. Geological Survey (USGS) Topographic Quadrangle maps, 7.5 minute series
- FNAI Element Occurrence Data
- DOACS Species Lists
- FWC Eagle Locator https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx
- FWC Wading Bird Colony Data
- USFWS Classification of Wetlands and Deepwater Habitats of the United States (1979)
- Northwest Florida Water Management District (NWFWMD), Florida Land Use, Cover, and Forms Classification System (FLUCFCS) data (1995)
- Aerial photographs of the project area from 1940 and 2010

Historic and current aerial photographs were examined to determine potential specific ecological communities and landscape conditions associated with for the potential occurrence of T&E species in the alignments. Soil surveys and maps depicting wetlands were analyzed in order to identify potential T&E species habitat and natural areas on site. This data was also used as a component of the reticulated flatwoods salamander desktop analysis, which is an appendix of the Biological Assessment, combined soils survey data, NWI data, and FLUCCS data. These data layers were analyzed to determine if there was a potential for reticulated flatwoods salamander habitat outside of the critical habitat unit. The eight resulting potential pond areas, were evaluated in the desktop analysis for reticulated flatwoods salamander.

Based on the habitat (plant community) association of each target taxon, the likely areas of occurrence for each potential species were identified. A search list of T&E species was compiled and added to the list of known species for Santa Rosa County, described above. The Efficient Transportation Decision Making (ETDM) comments were analyzed to ensure that the target T&E taxa were inclusive of species specifically mentioned.

After the plant communities were identified in the alignments, a strategy for searching for threatened and endangered plants and animals was developed. This strategy involved a series of transects designed to exhaustively assess each plant community.

Depending on the habitat and past land use history, the survey intensity employed varied. High Intensity surveys were conducted in areas that appear unique, or that have greater potential for T&E species due to the presence of a specific plant community or habitat. In these areas, 80% or more of the habitat was traversed with transects. All surveys within the alignments were high intensity surveys. Maps with locations of observed T&E species are included in **Appendix G**. **Appendix G** also includes maps of the FNAI occurrences within and adjacent to the project corridors.

In areas with gopher tortoise habitat, a minimum of 15% of the area proposed to be impacted must be surveyed according to the FWC gopher tortoise guidelines. In

order to cover the minimum area, biologists worked in teams and walked the alignments along evenly-spaced belt transects that were approximately 30 feet wide. The width of the 30 foot belt transects exceeded the 15% requirement and ensured that sufficient area was surveyed to determine the presence of potentially occupied burrows and/or abandoned burrows. Since the majority of the SR 87 alignment alternatives, excluding the existing roadway and wetlands, is suitable gopher tortoise habitat, high intensity transects were walked throughout the entire alignments.

The project team evaluated a 1,500 foot wide corridor buffer as a component of the reticulated salamander desktop analysis. The eight resulting potential pond areas were field verified and evaluated using the HDR method. The HDR method refers to the reticulated flatwoods salamander evaluation method developed by HDR, Inc. in conjunction with the USFWS and FWC in 2001 to assess habitat potential of wetland areas for the frosted flatwoods salamander and the reticulated flatwoods salamander. The HDR method was used to assess the quality of the potential ponds, the pond ecotones, and the uplands located around the ponds.
The majority of the habitats within the alignment areas are fire suppressed and do not have large stands of mature pine trees, which makes them inappropriate for red cockaded woodpecker habitat. The plant community descriptions follow in the results section. The FWC bald Eagle Nest Locator was used to determine the presence of known eagle nests, but none are in the vicinity of the project.

The existing land use within the alternative alignments was classified using FLUCCS. The dominant existing land use in both alignments was Wetlands Forested Mix, Hardwood Coniferous-Mixed, Coniferous Plantations, and Rangeland. The acreage and percent of existing land use cover by FLUCCS category is summarized in the **Table 5.7**. A figure is available in **Appendix E**.

Five natural ecological communities were observed within the alternatives (Sandhill, Floodplain Swamp, Basin Swamp, Dome Swamp, and Seepage Slope/Wet Prairie). There are many abiotic and biotic factors that influence the type of plant community development. Three of the most important factors are soil, hydrology, and fire. Landscape topography in this area of north Florida contains ridges and depressions. These depressions may be primarily seepage slope or contain a wetter bog or basin swamp surrounded by a margin of seepage slope. In deeper and generally wetter basin wetlands or where there is an abrupt gradient between uplands and wetlands, the upland plant communities will transition directly to a wetland, such as a bog or basin swamp, without a broad ecotone of seepage slope. Seepage slopes sometimes grade into floodplain swamps associated with the Blackwater River and Clear Creek.

Field descriptions of each community and their suitability for T&E species follow below. In each case, the most prevalent plant species are listed, followed by the results with respect to any T&E species observed in the alignments. Subsequently each T&E species is individually discussed. There were no federally listed threatened or endangered plant species observed.

Upland Plant Communities

Sandhill (FLUCCS #410 – Upland Coniferous Forests)

Alternative 1 = 57 acres

Alternative 2 = 83 acres

The Sandhill plant community that occurs along this alignment has been altered through silviculture activities (pine plantation) but includes other areas that are unplanted. All of these areas are fire suppressed. Fire suppression has allowed the growth of opportunistic, weedy tree species such as laurel oak (*Quercus hemisphaerica*), water oak (*Quercus nigra*), and Sweetgum (*Liquidambar styraciflua*) and shrubs such as hollies (*Ilex* spp.), blueberries (*Vaccinium* spp.), and others. As a result, the typical canopy and shrub layer cover is unnaturally high and the diverse groundcover associated with the intact version of this plant community is not present. Though a diversity of species characteristic of Sandhill plant communities were identified during the survey, their coverage was sparse throughout each alignment. Portions of the alignments were planted with sand pine (*Pinus clausa*), which is not a characteristic species for Sandhill plant communities. In most cases, the canopy is dominated by sand live oak (*Quercus geminata*) and scattered longleaf pine (*Pinus palustris*) with a subcanopy/shrub strata of yaupon (*Ilex vomitoria*) and bluejack oak (*Quercus incana*) and a groundcover dominated by runner oak (*Quercus margaretta*). The characteristic dominant canopy species for this plant community is longleaf pine. Sandhill is the most widespread upland plant community in the alignments. The most prevalent plants and any T&E species observed in the sandhill are listed below.

Sandhill – Plant Species Observed:

Observed canopy and subcanopy species include longleaf pine, turkey oak *(Quercus laevis),* post oak (*Quercus stellate),* sand live oak, dwarf live oak *(Quercus minima),* running oak *(Quercus pumila),* deerberry (*Vaccinium stamineum),* sparkleberry (*Vaccinium arborea),* and yaupon. Observed groundcover species include wiregrass (*Aristida stricta),* indiangrasses (Sorghastrum spp.), false rosemary (*Conradina canescens),* bluestem (*Andropogon* spp.), Oak ridge lupine (*Lupinus diffuses),* gopher apple (*Licania michauxii),* woody goldenrod (*Chrysoma pauciflosculosa),* golden asters (*Chrysopsis* spp.), silkgrass (*Pityopsis* spp.), blazing stars (*Liatris* spp.), bracken fern (*Pteridium aquilinum),* and wild indigo (*Baptisia* spp.).

Sandhill – Threatened & Endangered Species observed:

Plants*:* Hairy Florida wild indigo (*Baptisia calycosa* var. *villosa*) – State Threatened

Animals: Gopher tortoise – State Threatened

Wetland Plant Communities

Seepage Slope / Wet Prairie (FLUCCS #643 – Wet Prairie / Pine Savanna)

(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)

Alternative 1 = 19.41 acres

Alternative 2 = 19.16 acres

Seepage slopes occur where the downward movement of ground water is redirected laterally by less permeable layers in the soil such as increased clay content or spodic

horizons and water flows at or near the ground surface, saturating the soils. Generally wet prairies are seepage slopes that have lower gradient slopes over a wider distance creating large expanses of surface flow through sandy soils and are generally open, containing the greatest diversity in the groundcover. These systems are known for a high diversity of herbaceous and graminoid plant species and require regular, natural fires to burn through the landscape and control woody shrubs species, which otherwise grow to an inappropriate lifeform and alter the habitat structure. Many endemic and imperiled herbaceous plant species are associated with this plant community because seepage slopes are typically not found in an appropriate condition that favors a diverse groundcover, which would typically include many T&E species. In north Florida, large expanses of Seepage Slope and Wet Prairie have been converted to pine plantations and are altered by fire-suppressed growth of woody species, which negatively affects the characteristic, species-rich groundcover. The majority of the seepage slope/wet prairie within the alignment areas has been fire suppressed and is dominated by black titi (*Cliftonia monophylla*), white titi (*Cyrilla racemiflora),* sweet gallberry (*Ilex coriacea*), and gallberry (*Ilex glabra*). In areas that have been mowed or sprayed with broad leaf specific herbicides, such as the power line easements, there was often greater plant diversity and a more natural condition. The most prevalent plants and any T&E species observed in the seepage slopes are listed below.

Seepage Slope / Wet Prairie – Plant species observed:
There was a scattered canopy, when one was present at all, which consisted of slash pine (*Pinus elliottii*) and pond cypress (*Taxodium ascendens*). The subcanopy and shrub layers were dominated by black titi (*Cliftonia monophylla*), white titi (*Cyrilla racemiflora*), sweet gallberry (*Ilex coriacea*), fetterbush (*Lyonia lucida*), gallberry (*Ilex glabra*), sweet pepperbush (*Clethra alnifolia*), bayberry (*Myrica caroliniensis*), and odorless bayberry (*Myrica inodora*). The groundcover species included yellow colicroot (*Aletris lutea),* wiregrass (*Arista stricta*), sedge (*Carex* spp.), centella (*Centella asiatica),* woolly sunbonnets (*Chaptalia tomentosa),* rosebud orchid (*Cleistes divaricate),* sand swamp whitetop *(Rhynchospora latifolia),* pink sundew (*Drosera capillaris*), water sundew *(Drosera intermedia),* fleabane (*Erigeron vernus),* pipewort (*Eriocaulon* spp.), yellow fringed orchid *(Platanthera ciliaris),* bog buttons *(Lachnocaulon* spp.), umbrella grass *(Fuirena squarrosa),* blazing star (*Liatris spicatus),* club moss (*Lycopodium* spp.), cinnamon fern (*Osmunda cinnamomea),* royal fern (*Osmunda regalis),* common water dropwort (*Oxypolis filiformis),* wild bachelor's button *(Polygala lutea),* milkwort (*Polygala cruciata),* meadow beauty (*Rhexia alifanus),* meadow beauty (*Rhexia petiolata),* yellow meadow beauty (*Rhexia lutea),* beakrush (*Rhynchospora* spp.), parrot pitcher plant (*Sarracenia psittacina),* nutrush *(Scleria* spp.), bamboo vine (*Smilax laurifolia),* goldenrod (*Solidago* spp.), and yellow-eyed grass (*Xyris* spp.).

Seepage Slope– Threatened & Endangered Species observed:
Plants:
- Pine-woods Bluestem (*Andropogon arctatus*) – State Threatened
- Spoon-leaved Sundew (*Drosera intermedia*) – State Threatened
- Panhandle Lily (*Lilium iridollae*) – State Endangered

- Primrose Butterwort (*Pinguicula primuliflora*) – State Endangered
- Yellow Fringe Orchid (*Platanthera ciliaris*) – State Threatened
- Fernald's Pogonia (*Pogonia (Cleistes) bifaria*) – State Threatened
- White-top Pitcher Plant (*Sarracenia leucophylla*) – State Endangered
- Parrot Pitcher Plant (*Sarracenia psittacina*) – State Threatened
- Gulf Purple Pitcher Plant (*Sarracenia rosea (S. purpurea*)) – State Threatened

Animals: None directly observed

Basin Swamp (FLUCCS# 617 – Mixed Wetland Hardwoods)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 8.92 acres
Alternative 2 = 8.92 acres

Basin swamps are wetland plant communities characterized by long periods of inundation punctuated by infrequent dry periods. These areas are depressions in a relatively flat landscape and are dominated by a variety of canopy, subcanopy, and shrub species such as black titi, pond cypress, swamp bay (*Persea palustris*), swamp tupelo (*Nyssa biflora*), sweetbay magnolia (*Magnolia virginiana*) and slash pine. The basin swamps within the alignment are fire suppressed. Frequently, the groundcover coverage is sparse and diversity is low, which is probably a result of intense competition from growth of woody species.

Basin Swamp – Plant species observed:
The woody species found in the alignments include the following: sweet pepperbush, black titi, white titi, sweet gallberry, odorless bayberry, fetterbush, slash pine, pond cypress, swamp black gum *(Nyssa sylvatica var. biflora,)* and sweetbay *(Magnolia virginica).* Groundcover species include: longleaf threeawn *(Aristida palustris), sedge*, centella, panic grass *(Dichanthelium scabriusculum),* fleabane, pipewort, bog buttons, club moss, royal fern, marsh fleabane *(Pluchea* spp.*),* beakrush, nutrush, bamboo vine, and yellow-eyed grass.

Basin Swamp– Threatened & Endangered Species observed:
Plants: None directly observed
Animals: None directly observed

Dome Swamp (FLUCCS# 630 – Wetland Forested Mixed)
(NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)
Alternative 1 = 1.07 acres
Alternative 2 = 0 acres

Dome swamps are wetland plant communities characterized by long periods of inundation and occur in depressions in the landscape that may or may not be associated with other types of wetland systems (they may be isolated wetlands). Dome swamps typically have a partial to entirely closed canopy of cypress, black gum, and sweet bay, which also characterizes the dome swamps in the alignments. The subcanopy consists of cypress, sweet bay, tupelo, and red maple. There is a thick

woody shrub understory containing: St. John's wort (*Hypericum chapmanii*), titi, myrtle leaf holly, and fetterbush.

Dome Swamp – Plant species observed:
The canopy species and subcanopy species observed are pond cypress, swamp black gum, sweetbay, sweet gallberry, myrtle-leaf holly (*Ilex myrtifolia),* bayberry (*Myrica heterophylla),* odorless bayberry, wax myrtle, black titi, white titi, red chokeberry *(Photinia pyrifolia)*, sweet pepperbush, St. John's- wort *(Hypericum chapmanii),* and fetterbush. Observed groundcover species include: Virginia chain fern (*Woodwardia virginica),* royal fern, cinnamon fern, bamboo vine, poison ivy *(Toxicodendron radicans),* sedge, panic grass, longleaf threeawn, wiregrass, broomsedge (*Andropogon* spp.), pipewort, bog buttons, beakrush, Curtiss' sandgrass *(Calamovilfa curtissii),* and yellow-eyed grass.

Dome Swamp – Threatened & Endangered Species observed:
Plants:
- Pine-woods Bluestem (*Andropogon arctatus*) – State Threatened
- Curtiss' Sandgrass (*Calamovilfa curtissii*) – State Threatened
- Spoon-leaved Sundew (*Drosera intermedia*) – State Threatened
- Small-flowered Meadowbeauty (*Rhexia parviflora*) – State Endangered
- White-top Pitcher Plant (*Sarracenia leucophylla*) – State Endangered
- Parrot Pitcher Plant (*Sarracenia psittacina*) – State Threatened
- Gulf Purple Pitcher Plant (*Sarracenia rosea*) – State Threatened

Animals: None directly observed

Bottomland Forest (FLUCCS# 615 – Streams and Lake Swamps (Bottomland)) (NWI Classification – 1) Palustrine, Freshwater Forested/Shrub Wetland & 2) Riverine)
Alternative 1 = 18.51 acres
Alternative 2 = 18.51 acres

Bottomland forests are wetland plant communities that typically connect to riverine communities. The bottomland forests in the alignments surround both the Blackwater River and Clear Creek, which are both blackwater streams that drain into the Pensacola Bay. Because of the nature of the Blackwater River system, these plant communities in the alignment differ from many other bottomland forest systems because of the low mineral content and acidic water chemistry. These systems have many similarities with seepage slope/wet prairie and dome swamp systems throughout the floodplain.

Bottomland Forest – Plant species observed:
The canopy species and subcanopy species observed are pond cypress, swamp black gum, slash pine, Atlantic white cedar (*Chamaecyparis thyoides),* sweetbay, southern magnolia *(Magnolia grandiflora),* dahoon *(Ilex cassine),* sweet gallberry, myrtle-leaf holly, bayberry, odorless bayberry, wax myrtle, black titi, white titi, red chokeberry, sweet pepperbush, St. John's- wort, fetterbush, St. John's- wort (*Hypericum*

galioides). Observed groundcover species include: Virginia chain fern, royal fern, cinnamon fern, poison ivy, spikegrass *(Chasmanthium* spp.), sedge, panic grass, longleaf threeawn, wiregrass, broomsedge, pipewort, bog buttons, beakrush, and yellow-eyed grass.

Bottomland Forest – Threatened & Endangered Species observed:
Plants:
- Spoon-leaved Sundew (*Drosera intermedia*) – State Threatened
- Panhandle Lily (*Lilium iridollae*) – State Endangered
- Primrose Butterwort (*Pinguicula primuliflora*) – State Endangered
- Yellow Fringe Orchid (*Platanthera ciliaris*) – State Threatened
- Fernald's Pogonia (*Pogonia* (*Cleistes*) *bifaria*) – State Threatened
- White-top Pitcher Plant (*Sarracenia leucophylla*) – State Endangered
- Parrot Pitcher Plant (*Sarracenia psittacina*) – State Threatened

Animals: None directly observed

Within the two alignment alternatives, there are a variety of wetland plant communities with various hydroperiod requirements. In some areas disturbances such as silviculture, residential development, commercial development, roadways, and other human activities have altered the habitats to a point where there is no natural habitat remaining for T&E species. Throughout the alignments, there are sections where plant communities remain intact allowing for some T&E plant species to thrive. Critical habitat units for the Gulf sturgeon and reticulated flatwoods salamander were identified in the alignment area although no individuals of either species were observed during the field surveys. There were no federally listed threatened or endangered plant species observed. The upland areas that remain undeveloped are primarily sandhill plant communities. These areas are modified (pine plantations) and are fire suppressed, which has allowed the growth of a woody understory and the shading of herbaceous groundcover species. The effects of fire suppression have lowered the habitat suitability of this plant community for gopher tortoises; however, a number of potentially occupied gopher tortoise burrows were identified within the alignment area during the survey (see **Appendix G**). A total of 12 state listed plant species were found during field surveys.

Five natural ecological communities were observed within the alternatives (Sandhill, Floodplain Swamp, Basin Swamp, Dome Swamp, and Seepage Slope/Wet Prairie). There were no federally listed threatened or endangered plant species observed.

Sandhill – Threatened & Endangered (T&E) species observed include the following plants: State Endangered (or Threatened) Hairy Florida wild indigo (*Baptisia calycosa* var. *villosa*); and the following State Threatened Animals: Gopher tortoise (State Threatened).

Seepage Slope – T&E species observed include the following state threatened plants: Pine-woods Bluestem (Andropogon arctatus), Spoon-leaved Sundew (Drosera intermedia), Yellow Fringe Orchid (Platanthera ciliaris), Fernald's Pogonia (Pogonia (Cleistes) bifaria), Parrot Pitcher Plant (Sarracenia psittacina)

and Gulf Purple Pitcher Plant (Sarracenia rosea (S. purpurea)); as well as the following state endangered plants: Panhandle Lily (Lilium iridollae), Primrose Butterwort (Pinguicula primuliflor and White-top Pitcher Plant (Sarracenia leucophylla). No T&E animal species were observed.

Basin Swamp – No T&E species were observed.

Dome Swamp – T&E species observed include the following state threatened plants: Pine-woods Bluestem (Andropogon arctatus), Curtiss' Sandgrass (Calamovilfa curtissii), Spoon-leaved Sundew (Drosera intermedia), Parrot Pitcher Plant (Sarracenia psittacina), and Gulf Purple Pitcher Plant (Sarracenia rosea); as well as the following state endangered plants: Small-flowered Meadowbeauty (Rhexia parviflora) and White-top Pitcher Plant (Sarracenia leucophylla). No T&E animal species were observed.

Bottomland Forest – T&E species observed include the following state threatened plants: Spoon-leaved Sundew (Drosera intermedia), Yellow Fringe Orchid (Platanthera ciliaris), Fernald's Pogonia (Pogonia (Cleistes) bifaria) and Parrot Pitcher Plant (Sarracenia psittacina); as well as the following state endangered plants: Panhandle Lily (Lilium iridollae), Primrose Butterwort (Pinguicula primuliflora) and White-top Pitcher Plant (Sarracenia leucophylla). No T&E animal species were observed.

Impacts to the T&E plant species documented during the field survey will be avoided to the maximum extent practicable since they are located primarily in the floodplains of the Blackwater River and Clear Creek. The floodplains of these waterbodies will be bridged and it is anticipated that the T&E plant species will be avoided during construction. State-listed plants exist in the project area since suitable habitat areas occur based on habitat mapping and field surveys. Pedestrian searches of these habitat areas were conducted for each state listed species. The FWC, Florida Department of Agriculture and Consumer Services (DACS) and the Endangered Plant Advisory Council (EPAC) are being notified that FDOT as owner is allowing for salvaging by others of affected protected plants on this project prior to construction in accordance with state law (Chapter 581.185, Florida Statutes), pending their receipt of the appropriate permits. It is our conclusion that protected plants potentially occurring within the project corridor will be impacted and may be salvaged in accordance with state law (Chapter 581.185, F.S.).

No coastal, marine, or estuarine habitat will be directly impacted by the proposed project, therefore, the project would have no effect to the following species: Piping Plover (*Charadrius melodus*), loggerhead (*Caretta caretta*), hawksbill (*Eretmochelys imbricata imbricata*), green sea turtle (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), and Kemp's ridley (*Lepidochelys kempii*).

The following Federally listed Wildlife have a potential for involvement in this project:

Gulf sturgeon - The Gulf sturgeon is federally and state listed as a threatened species. The Gulf sturgeon is a subspecies of the Atlantic sturgeon (*A.*

oxyrhynchus), which can be found along the Florida coast. The Gulf sturgeon is an anadromous species (migrates upriver from the sea to spawn in freshwater) and populates both freshwater and marine environments. The Gulf sturgeon is a slow-maturing fish, with females requiring 8 to 12 years to reach sexual maturity, while males take 7 to 10 years. Most adult feeding occurs along the Gulf of Mexico and its estuaries. Being a bottom-feeding species, they primarily eat invertebrates, including brachiopods, insect larvae, mollusks, worms, and crustaceans. As part of the sturgeon lifecycle, the species is known to acclimate to fluctuating salinity levels through osmoregulation as early as age one. The primary constituent elements for Gulf sturgeon consist of: abundant food items, riverine spawning sites, riverine aggregation areas, flow regime, water quality, sediment quality, and appropriate migratory pathways. The 5 year status review (USFWS, 2009) estimates the number of sturgeon in the Yellow River population at approximately 1,500 individuals in 2003; however, USFWS still recommends managing the Gulf sturgeon as a threatened species. The Blackwater River is designated as Gulf sturgeon critical habitat by the USFWS and is traversed by both alternatives 1 and 2. The project "may affect, but is not likely to jeopardize the continued existence of the Gulf sturgeon or destroy or adversely modify its designated critical habitat". See **Appendix I** for USFWS formal consultation coordination and determination.

Reticulated Flatwoods Salamander - The RFS is one of the smaller mole salamanders and is federally and state listed as an endangered species. The RFS is a fossorial (burrowing) species that breeds within ephemeral wetlands in the fall. After the eggs are laid, the wetlands must flood within 2-3 days otherwise the eggs will desiccate. By March or April the adult RFS leave the breeding ponds, but are hard to locate since they are fossorial. Adult salamanders are nocturnal and carnivorous, opportunistic feeders, eating primarily earthworms and arthropods. The RFS requires fire-maintained, mesic pine uplands containing wiregrass and longleaf pine and isolated, depressional wetlands that flood in the fall. The primary constituent elements for this species include: breeding habitat, non-breeding habitat, and dispersal habitat. The RFS-2, sub-unit A critical habitat unit is traversed by both Alternatives 1 and 2. The current population status within the critical habitat unit is unknown. Due to the presence of the critical habitat, the observed appropriate habitat within the alignments, and the efforts proposed by FDOT to minimize direct impacts to the critical habitat, the proposed project "may affect, but is not likely to jeopardize the continued existence of the reticulated flatwoods salamander or destroy or adversely modify its designated critical habitat". See **Appendix I** for USFWS formal consultation coordination and determination.

Eastern Indigo Snake - The eastern indigo snake is listed by both the USFWS and the FWC as threatened. This species is known to occupy a broad range of habitats from scrub and sandhill communities, to wet prairies and mangrove swamps. The eastern indigo snake seems to be more strongly associated with high, dry, well-drained sandy soils, closely paralleling the sandhill habitat preferred by the gopher tortoise. Gopher tortoise burrows and other subterranean cavities are

commonly used as dens and for egg laying. There is a moderate potential for the eastern indigo snake due to the amount of undeveloped land within the alignments. The USFWS Standard Measures for the Eastern Indigo Snake, which specify education of the construction contractor concerning avoidance of eastern indigo snakes and post construction reporting, will be implemented during the construction phase. Due to the implementation of the USFWS measures the project "may affect, but is not likely to adversely affect" the eastern indigo snake.

Wood Stork - The wood stork is listed as endangered by both the USFWS and the FWC. The wood stork is a highly colonial species usually nesting in large colonies and feeding in flocks. Nests are frequently located in trees or in man-made structures surrounded by water. They feed in freshwater marshes, narrow tidal creeks, flooded tidal pools, and roadside ditches. Particularly attractive feeding sites are depressions in marshes or swamps where fish become concentrated during periods of falling water levels. There are no wood stork rookeries documented in proximity to the alignments (FWC, 1999). The closest rookery is 12 miles away (FWC, 1999) and the closest Core Foraging Area (CFA) is 142 miles east of the alignments in Gadsden County (FWC, 2010). The project will have "no effect" on the wood stork.

Red-cockaded Woodpecker - The red-cockaded woodpecker (RCW) is federally endangered and a state species of special concern. The RCW is a small woodpecker inhabiting open, mature pine woodlands, generally longleaf pine flatwoods in north and central Florida. RCWs nest and forage in mature pine flatwoods and their distribution is tied to remaining areas of old-growth pine forests. RCWs are non-migratory and maintain territories year-round. Populations are small and highly fragmented and are found primarily on federally managed lands with some state-owned and private lands supporting smaller populations. There are no documented red-cockaded woodpecker populations within the vicinity of the alignments (FWC, 2005). The alignments lack mature pine trees that would be suitable for red cockaded woodpecker populations. The project will have "no effect" on the red-cockaded woodpecker.

Freshwater Mussels - Several species of freshwater mussels are federally and state listed as threatened and endangered throughout north Florida and eight additional species were recently listed under the Endangered Species Act (ESA). The Blackwater River and Clear Creek are not listed as critical habitat for any currently listed or proposed mussel species and there are currently no freshwater mussel species listed as threatened or endangered in Santa Rosa County. The proposed critical habitat is within adjacent watersheds upstream of the alignments. The project will have "no effect" on freshwater mussel species.

Florida Manatee - The Florida manatee is listed as endangered by both the USFWS and the FWC. The Florida manatee is a large (182 to 400 lbs., up to nine feet long), gray, nearly hairless, walrus-like aquatic mammal. The home range for the Florida manatees is generally the southeastern United States, although some individuals have been documented to travel north to Massachusetts and west to

Texas. Manatees occur within Santa Rosa County according to the USFWS and FWC; however, there is no critical habitat within the vicinity of the alternative alignments. This species was not located during the field surveys and it is unlikely that manatees would travel upstream into the Blackwater River in the vicinity of the project. The USFWS "Standard Manatee Conditions for In-Water Work" will be followed during construction and, therefore, the project "may affect, but is not likely to adversely affect" manatees.

The following State listed Wildlife have a potential for involvement in this project:

Gopher Tortoise - The gopher tortoise is a state listed threatened species, which generally lives in sandy, well-drained soils with herbaceous plants available for foraging. Gopher tortoises dig burrows in soil for shelter and for laying eggs. The burrow may also become occupied by commensal species, including the Florida pine snake, eastern indigo snake, and the gopher frog. There were approximately 55 gopher tortoise burrows observed within the alignment areas. Overall, there are 22 potentially occupied gopher tortoise burrows in the vicinity of Alternative 1 and 35 potentially occupied gopher tortoise burrows in the vicinity of Alternative 2. Although there are potentially occupied burrows present, an additional 100% survey will be required prior to obtaining a relocation permit.
Avoidance of gopher tortoise take is mandatory. In order to avoid impacts to gopher tortoise individuals, relocation permitting will be required. An additional field survey must be conducted at least 90 days prior to relocation permitting. Any gopher tortoise burrow located within 25 feet of an area proposed for development must be relocated according to FWC requirements. The FDOT will commit to perform pre-construction surveys for gopher tortoises and secure a relocation permit from the FWC for gopher tortoise burrows, as necessary. If federally listed commensals are located during the burrow surveys, separate coordination/permits will be required from USFWS during relocation. Since tortoises and commensal species will be relocated to suitable habitat, the project "may affect, but is not likely to adversely affect".

Florida Gopher Frog - The Florida gopher frog is commensal with the gopher tortoise and is listed by the FWC as a species of special concern. No Florida gopher frogs were previously documented within or adjacent to the alignments and none were observed during field surveys. Occurrence of this species within the alignments is possible due to the presence of both gopher tortoise burrows and suitable habitat within and near the alignments. The FWC requires coordination for commensal species. Since tortoises and commensal species (when required) will be relocated to suitable habitat, the project "may affect, but is not likely to adversely affect".

Southeastern American Kestrel - The southeastern American kestrel is a state threatened falcon species found in open pine habitats, sandhills, prairies and pastures. The species utilizes tall dead trees or utility poles for cavity nest sites. The species is a year-round resident; the subspecies that breeds in Florida is listed while the wintering northern migrant is not listed. There were no observed or

documented kestrels within the alignments. The project will have "no effect" on the kestrel.

Wading Birds - The 1) tricolored heron (*Egretta tricolor*), 2) snowy egret (*Egretta thula*), 3) white ibis (*Eudocimus albus*), and 4) little blue heron (*Egretta caerulea*) are state listed species of special concern. These wading birds feed in permanently and seasonally flooded wetlands, marshes and swamps. They are generally year-round residents and nest in low woody vegetation including willow, cypress, and woody thickets. Because of the potential for wetland impacts, the project "may affect, but is not likely to adversely affect" wading birds.

Florida Black Bear - The black bear was recently delisted by FWC and is no longer a threatened species. While the Florida black bear was not observed during the field survey, it should be noted that portions of the alignments are within the secondary range of a Florida black bear population (Eglin). A wide variety of forested communities are needed to support the varied seasonal diet of the bears. The FWC has identified eight areas of Florida black bear populations with each one broken into primary and secondary ranges. GIS data obtained from the Florida Geographic Data Library does not indicate any bear road-kills in the vicinity of the alternatives. The project will have "no effect" on this species.

Additionally, the Bald Eagle is protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The bald eagle is a water-dependent species that is found near coastal areas, bays, rivers, lakes, or other bodies of water which provide concentrations of food sources. Suitable habitat is present throughout the project area, but bald eagle nests have not been observed along the Blackwater River, Clear Creek, or any of the wetlands associated with these waterbodies. Active eagle nests are present on the eastern shoreline of Escambia Bay approximately eight miles west of Milton. No nests would be disturbed during construction activities. Prior to any construction, a site-specific survey would be conducted to determine the presence or absence of bald eagle nests in or near the construction area. It is understood that other than the recent guidance issued by US Fish and Wildlife Service (USFWS) relating to potential involvement with bald eagles, that compliance with the Florida Fish and Wildlife Conservation Commission's (FWC) Bald Eagle Management Plan and Bald Eagle Permitting Guidelines are also required. The proposed project would have minimal effects on river hydraulics, the river floodplain, flow patterns, or on eagle food sources. It is anticipated that the project will not affect the bald eagle.

As previously mentioned, both project alternatives traverse RFS critical habitat unit RFS-2, Subunit A and the Blackwater River which is critical habitat for the Gulf sturgeon. The intent of critical habitat is the protection of the essential physical and biological features of the landscape in an appropriate spatial arrangement and quantity that is needed for a species to survive and reproduce. Critical habitat does not affect private landowner actions but does affect Federal agency actions, authorizations, and funded projects. Under the ESA, Federal agencies must protect the characteristics of the designated areas and avoid destruction or adverse modification. Designated critical habitat is defined as a specific area within the geographic area occupied by a federally

listed species at the time it is listed. Critical habitat contains physical and biological features that are considered essential to the conservation of the species and require special management considerations for protection. Designated critical habitat can also include specific areas outside the geographic area occupied by a species at the time of federal listing if the area is determined to be essential to the conservation of the species.

In an e-mail dated May 16, 2012, USFWS responded with their comments and findings to the ESBA Report. The USFWS agreed with the determination of "may affect, not likely to adversely affect" the eastern indigo snake (*Drymarchon corais couperi*) and the Florida manatee (*Trichechus manatus latirostris*) since the standard construction guidelines for both species would be followed. A determination of no effect was made for the Red-cockaded Woodpecker (*Picoides borealis*) and the Wood Stork (*Mycteria americana*) since appropriate habitat was not present within the project area. A determination of no effect was made for freshwater mussels since the Blackwater River and Clear Creek are not listed as critical habitat for any currently listed or proposed mussel species and there are currently no freshwater mussel species listed as threatened or endangered in Santa Rosa County. However, they did not agree with the determination of effects for the Gulf sturgeon and the RFS. On August 27, 2012 the USFWS recommended that FDOT initiate formal consultation for the potential impacts to the RFS critical habitat unit 2, subunit A (RFS2A) and the Gulf sturgeon. A separate Endangered Species Biological Assessment dated February 2013 was prepared for this project and sent to FDOT for their review and concurrence of effect of determinations. This report is being updated due to the recent responses to the formal consultation with the USFWS (**Appendix I**).

In order to minimize impacts to the Gulf sturgeon critical habitat, the Blackwater River and associated floodplain on both sides of the river can be bridged. Minimization of impacts to the RFS and critical habitat can be accomplished through location of the alignment to minimize intrusion into the specific habitat areas. The alignments were shifted to roughly parallel the power line easement on the southernmost edge of the critical habitat unit, which is already a disturbed linear feature traversing this area. The critical habitat area will be bridged to minimize impacts and maintain connectivity.

The proposed bridges would be composed of Florida I-45 Beams, resulting in spans of approximately 98 feet and 90 feet between pile bents for the bridges over the Blackwater River and Clear Creek, respectively. The pile bents would consist of 24" by 24" pre-stressed piles that are located approximately six feet apart. The southbound lanes would be wider (56 feet) and would need nine pilings per pile bent, while the northbound lanes (43 feet) would need eight.

Two pile bents with 17 pilings would be installed within the Blackwater River. All construction methods will be consistent with the "Construction Special Provisions – Sturgeon Protection Guidelines". The only "in water" construction work associated with the bridge is the piling installation. In-water work is defined by any work below the water line and does not include the use of boats in the river or the placement of any

material above the water line. During in-water work, pilings will be installed after a "ramp-up" procedure that will alert any Gulf sturgeon within the vicinity of the construction site. These construction restrictions and construction techniques will limit the potential that Gulf sturgeons are exposed to harm, harassment or take during construction. See **Appendix I** for other recommendations. The only proposed, permanent and direct impact to the Gulf sturgeon critical habitat are associated with the bridge support pilings, which total approximately 68 square feet (0.0016 acres) of the approximately 14.7 acres of critical habitat within the action area. There are approximately 1,730 river miles of designated Gulf sturgeon critical habitat. The total length of the bridge is approximately 5,570 linear feet with approximately 180 linear feet over the Blackwater River. The footprint of the bridge over the Blackwater River is approximately 0.43 acres. Direct discharge from the bridge deck will be collected and treated in permitted stormwater ponds prior to any discharges. The Blackwater River is an OFW, which requires specific BMPs during construction and stormwater design to prevent degradation to the river. The increased BMP and stormwater requirements will minimize impacts to the Gulf sturgeon. Construction staging areas will be located outside the floodplain. The following considerations should be noted:

1. The SR 87 project is not likely to adversely affect the river aggregation area, Cooper's Basin, since the project is located approximately two miles upstream from the basin and due to the implementation of erosion control measures and OFW standards to prevent stormwater runoff.
2. Food and prey items are not likely to be impacted since the sturgeon does not feed within the Blackwater River and the implementation of OFW standards will minimize impacts to water quality.
3. The Blackwater River is not a known spawning site, however, spawning may occur upstream of the SR 87 project site.
4. The SR 87 project is not likely to result in any modification to the overall flow regime within the Blackwater River. The site will be spanned with a minimum number of pilings and columns installed within the river and the river will ultimately retain the same flow regime. The river will not be permanently or temporarily impounded.
5. Water quality within the Blackwater River is not likely to be adversely impacted as a result of the implementation of OFW standards. A minimum of in water work within the Blackwater River will occur and the floodplain will be bridged. Stormwater runoff will be captured and treated prior to discharge.
6. Sediment quality within the river is not likely to be adversely impacted by the project. The site will be maintained to OFW standards, which will result in minimum runoff or discharge to the river.
7. The SR 87 project is not likely to adversely impact the migratory pathway within the Blackwater River. The site will be spanned with a minimum number of pilings and columns installed within the river and the river will ultimately retain the same flow regime. The river will not be permanently or temporarily impounded.

Approximately 38 pile bents (19 bents for each section) with a total of 646 pilings would be used to support the bridge within the RFS critical habitat unit. In the location

of the bridges, clearing and grubbing will be limited to cutting vegetation to the ground surface. Root raking will only be used in areas where piling cap supports are anticipated, which will minimize impacts to the floodplain wetlands that support the Blackwater River and the RFS critical habitat unit. Replanting the areas beneath the bridge will not be necessary since it is anticipated that the existing seedbank will provide adequate cover and stabilize the soil surfaces. During any phase of construction, best management practices will be used to minimize potential impacts to water quality. See the ESBA prepared for this project for details on proposed construction activities. The potential direct impacts to the 162 acre RFS2A critical habitat unit are limited to the 646 bridge support pilings, which total approximately 2,720 square feet (0.06 acres). The total length of the bridge is approximately 5,570 linear feet with approximately 1,663 linear feet over the critical habitat unit. The footprint of the project alignment through the mapped critical habitat unit is approximately 8.3 acres (5% of the overall critical habitat unit) and is comprised of approximately 5.58 acres of upland areas (non-breeding habitat) that are disturbed by existing road, power line ROWs, and pasture and approximately 2.72 acres (breeding and dispersal habitat) of low-moderate RFS potential wetlands. Direct impact to individuals using the wetlands/ponds can be minimized by restricting work in these wetlands during RFS breeding season, which typically extends from October to February. Construction of the approximately 5,570 linear foot bridge over the RFS2A critical habitat unit will minimize any potential direct project effects.

Indirect effects may result from normal bridge operation and maintenance procedures, but can also be minimized using best management practices. Effect determination for the Gulf sturgeon, the RFS and the respective critical habitats are pending formal consultation with the USFWS.

Both alignments cross the Blackwater River and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the wetlands delineated within the floodplain area and the river will be bridged. At the start of the bridge, a retaining wall will be constructed and the work on the bridge will continue from the retaining wall. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The stormwater ponds will provide increased capacity to meet FDEP OFW discharge requirements. Pilings will be placed to limit direct impacts to T&E species, whenever possible.

Additionally, both alternatives cross Clear Creek and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the open water portion of the creek and a portion of the floodplain will be bridged. The primary goal of the bridge is to reduce upstream flooding and to allow the creek to flow unobstructed to receiving waterbodies. The bridge over Clear Creek will help to minimize impacts to the creek bed, which provides habitat for many aquatic organisms. Stormwater will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the creek or the wetlands below the bridge. The bridge over Clear Creek will be 180 feet long, 99 feet wide (in two

separate sections), and 20.7 feet above the ground. The canopy and some shrubs will be impacted long term by the bridges and groundcover will be impacted during construction. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival.

5.4.11 Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on actions that are authorized, funded, or undertaken that may adversely affect Essential Fish Habitat (EFH). EFH evaluations are also required as a component of the PD&E process in accordance with Part 2, Chapter 11 of the PD&E Manual.

EFH is defined as waters and substrate necessary for fishery species to spawn, breed, forage, and grow to maturity. An adverse effect would be any impact that reduces the quality and/or quantity of EFH. Consultation for EFH is triggered when an action may adversely affect EFH; otherwise, no consultation is required. A review of NMFS's EFH Mapper (http://sharpfin.nmfs.noaa.gov/website/EFH_Mapper/map.aspx) indicates that EFH is not present in the project area. The nearest mapped EFH is located approximately 3.1 miles downstream from the project area and corresponds with the approximate limits of tidal influence.

Any potential downstream impacts would be minimized through the use of bridges and erosion control measures. In summary, the SR 87 project would not have an adverse effect on EFH. NMFS reviewed the proposed location for Alternatives 1 and 2 as part of the program screening through the ETDM process and indicated that the project would not directly impact NMFS trust resources. In addition, due to the OFW requirements, the stormwater systems will be designed to prevent degraded waters from reaching estuarine and marine habitats.

The USFWS identified concerns over designated critical habitat and potential habitat for federally listed species located within the corridor. USFWS also identified concerns with habitat fragmentation and wetland impacts and recommended several measures to minimize potential impacts to listed species. Surveys were conducted and potential habitat was evaluated. A wildlife assessment was prepared and coordinated with USFWS. The Formal Section 7 consultation process for the reticulated flatwoods salamander and gulf sturgeon was completed per the Services Biological Opinion issued on December 20, 2013 (See **Appendix I**).

The Blackwater River floodplain and Clear Creek will be bridged which will minimize potential impacts, including fragmentation since bridging retains components of connectivity within habitat. The results of the formal consultation, including the conditions, will be incorporated into the project. Mitigation for wetlands will be implemented within the same regional area.

FWC identified concerns with wildlife habitat impacts, state listed species, species of concern that are not listed, conservation lands, equipment staging during construction, and minimization measures. FWC also recommended completely spanning streams and wetlands. Surveys were conducted to identify potential impacts to wildlife habitat. Mitigation for wetlands will be implemented within the same regional area. The Blackwater River floodplain and Clear Creek will be bridged which will minimize potential impacts and retain some connectivity. Potential wildlife impacts are considered as part of the evaluation.

5.4.12 Farmlands

Conducting a GIS analysis of Prime Farmland (using USDA-NRCS data) and Important (Unique) Farmland Analysis (using 2004 NWFWMD data) has resulted in the determination that there are Prime Farmland soils within the Project Area, as well as areas of Farmlands with Local Importance. Impacts to Agricultural lands are primarily restricted to improved and unimproved pasture. Since the impact to Prime Farmland is small, the NRCS assigned a minimal impact rating for both Alternative 1 and 2. However, approximately seven acres of Prime Farmland is impacted in Alternative 1 and NRCS did request the farmlands assessment process be completed. This process is a requirement of the Farmland Protection Policy Act (FPPA) of 1984. Because this is a Corridor type project, Form NRCS-CPA-106 was completed and submitted to NRCS along with the GIS files of both Alternatives 1 and 2. On July 19, 2013, Rick Robbins, Soil Scientist for USDA-NRCS, sent the project team comments on the NRCS findings. The following table is a summary of his findings. **Appendix H** includes Form NRCS-CPA-106 with the NRCS information; along with the location maps of the farmland areas. They have determined that there are delineations of Farmland of Unique Importance and Farmland of Local Importance within the scope of the project.

Table 5.13 Summary of Farmland Impacts

Land Information	Alternative 1 Impacts	Alternative 2 Impacts
A. Total Acres Prime And Unique Farmland	6.8 Acres	0.0 Acres
B. Total Acres Statewide And Local Important Farmland	45.8 Acres	46.9 Acres
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.00001%	0.00001%
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	64.7%	61.6%

5.4.13 Construction

Existing Roadways/Intersections: The SR 87 Connector is primarily new construction of a new roadway facility, and disruptions will be limited to the crossings and connections with existing facilities. The connection points are limited to:

- SR 87 South at US 90, and
- SR 87 North (at either Oakland Drive or at Seasons Drive)

The crossings/intersections for the SR 87 Connector are limited to:

- Bobby Brown Road
- East Milton Road
- Opportunity Drive
- Pat Brown Road
- Munson Highway
- Winston Brown Road
- Trail Ride North (Alternative 2)
- Seasons Drive (Alternative 2)

Existing Roads that would merge into the new SR 87 Connector include:

- A portion of East Milton Road
- Judicial Way
- Eagles Way (dirt road)
- E. Oakland Drive (Alternative 1)
- A portion of Season Drive (Alternative 2)

Intersection analysis was performed at 13 intersections for each of the two Build Alternatives. The results are summarized in Table 7 (Page 18) of **Appendix C.** In 2035, only two intersections fail under Alternative 1, and one intersection fails under Alternative 2. The analysis indicates that for Alternative 1 both intersections of SR 87N and SR89/Oriole Street; and SR 87 Connector and Munson Highway may need to be signalized if the signal warrants are met. Alternative 2 only requires the signalization of the intersection of SR 87 Connector and Munson Highway because Alternative 2 continues west of SR87N and connects with SR 89.

The intersection analysis also indicates that SR 87 Connector intersections with US 90 and SR87N for both Alternative 1 and Alternative 2 will operate at LOS C or better by 2025 and LOS D or better by 2035 during the AM and PM peak hours. The intersection of SR 87 connector and Munson Highway will fail as unsignalized, but will operate at LOS B for both alignments in 2035 when signalized. Signal warrant analyses should be performed during the design phase with updated information on layout and traffic, and preferably using HCM 2010 procedures.

A sensitivity analysis was performed to evaluate the impacts of a future Wal-Mart store that may be located near the intersection formed by Alignment 1 of SR 87 Connector and SR87N. A traffic concurrency study performed in 2006 to support a land use amendment indicated that the Wal-Mart store will generate up to 315 new directional PM peak hour trips. No updated traffic study was performed since 2006, however, County staff indicated that Wal-Mart requested in January 2012 to extend the development order until November 2014. Wal-Mart proposed location places it in TAZ 519. Zonal data for TAZ 519 was reviewed for the 2006 validated and 2035 Cost Feasible NWFRPM models. Whereas residential units are anticipated to double between 2006 and 2035, employment will only increase by 100 workers for the entire TAZ. Therefore, the Wal-Mart store has not been accounted for in the Cost Feasible model. To examine the future traffic impacts of the proposed Wal-Mart store, the net increase in peak hour trips estimated in the 2006 concurrency study were overlaid in both directions onto 2035 future traffic projections at the two nearest intersections and then a SYNCHRO analysis was performed. The analysis indicated that these intersections would still operate at acceptable LOS D or better in 2035 after accounting for Wal-Mart traffic that was estimated in the 2006 study. Please refer to **Appendix C** for the DTTM which contains the complete analysis.

Construction Activities: Construction of the roadway may require limited excavation of unsuitable material and use of materials such as lime rock, asphaltic concrete, and portland cement concrete. The removal of structures and debris will be in accordance with local and state regulatory agencies permitting this operation. The contractor is responsible for their methods of controlling pollution on haul roads, borrow pits, other material pits, and areas used for disposal of materials from the project. Temporary erosion (water quality) control features as specified in Section 104 of the FDOT Standard Specifications for Road and Bridge Construction, latest edition, will consist of measures such as temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings, and berms. For the residents living along the SR 87 Connector, some of the materials stored for the project may be displeasing visually; however, this is a temporary condition and should pose no substantial problem in the long term.

Construction activities may generate temporary increases in air pollutant emissions. Such emissions will be controlled in accordance with the FDOT Standard Specifications for Road and Bridge Construction, as directed by the FDOT Project Manager. Installation of the foundations for the large span bridge at the Blackwater River may result in noise and/or vibration impacts during construction. Such impacts may also occur during general construction activities such as equipment operations and soil compaction.

Although ***Section 335.02*** of the ***Florida Statutes*** exempts FDOT from compliance with local noise and vibration ordinances, it is FDOT's policy to follow the requirements of local ordinances to the extent that it is reasonable. Noise and vibration impacts from on-site activities and from off-site activities such as traffic detours, haul routes and other off-site operations will be controlled in accordance with the FDOT Standard Specifications for Road and Bridge Construction, as directed

by the FDOT Project Manager. General specifications include noise screening guidelines for stationary equipment, exhaust noise, noise from loose equipment parts, and excessive tailgate banging. Also, noisy equipment should only be used when necessary and should not be operated when not being used for construction activities. Particularly noisy construction activities should be scheduled during daytime hours. If possible, several noisy operations should be scheduled concurrently to take advantage of the fact that the combined noise levels produced may not be significantly greater than the level produced if the operations were performed separately and the overall duration of the activities will be significantly reduced. Strategies that may be employed during construction to reduce noise and vibration impacts include locating staging areas and storage yards away from noise sensitive areas where possible and screening these areas from nearby noise sensitive areas when necessary. Haul road traffic can be routed away from areas with noise sensitive populations to reduce noise impacts associated with truck traffic. The FDOT will conduct coordination prior to and during construction that will address noise issues related to construction and how complaints from the public will be handled.

The contractor will be directed to specifically adhere to Section 455-1 of the Standard Specifications regarding measurement and prevention of vibration impacts to existing structures during roadway construction where applicable.

Although very few businesses will be affected by construction, any access to businesses will be maintained in a practical manner as dictated by the construction phases. Best Management Practices will be implemented in all phases in order to satisfy permit requirements and minimize indirect construction impacts. In addition, the project will include a Traffic Control Plan. The local news media will be notified in advance of road closings and other activities that could excessively inconvenience the community so that persons conducting business in the affected area can plan travel routes in advance. Signs will be used as appropriate to provide notice of pertinent information to the public. Signs providing the name, address, and telephone of a Department contact person will be displayed on-site to assist the public in obtaining immediate answers to questions and logging complaints about project activity.

5.5 Cumulative Impacts

Indirect impacts are future impacts caused by or resulting from the proposed project that are reasonably certain to occur. These impacts may occur outside of the area directly affected by the proposed project. Potential indirect impacts include increased noise, traffic, and development. Cumulative effects include the effects of future state, local, or private actions that are reasonably certain to occur in the project area. Indirect and cumulative impacts may result in increased fragmentation of wildlife habitat. In addition, the proposed roadway construction may result in increased wildlife mortality due to collisions with vehicles. Future federal actions that require ESA Section 7 consultations that are unrelated to the proposed project are not considered in the determination of cumulative effects because they require a separate consultation in accordance with Section 7 of the ESA.

5.5.1. Indirect Impacts

Indirect impacts are defined as those effects caused by the action of the project, but occurring in the future at a more distant location, but still reasonably foreseeable. Indirect impacts may include growth-inducing effects and other effects related to changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8 and 50 CFR 402.02). These induced effects are those that would not or could not occur except for the implementation of a project. These actions are often referred to as "but for" actions. The term "indirect impact" is often used interchangeably with the term "secondary impact."

Indirect impacts for wetlands were evaluated during the UMAM evaluation as described in the WER. A number of factors were considered in the UMAM score for each alternative (e.g., introduction of weedy or invasive species, light emissions). These types of impacts would apply to both wetland and upland habitats and are described in this section. Many T&E species located within the proposed roadway are wetland dependent, meaning that they utilize wetlands for at least some portion of their life cycle. Avoidance, minimization, and mitigation measures for these species will reduce indirect impacts to these T&E species.

Other indirect impacts are possible due to increased noise levels, modification of wildlife movement, and impacts to air and water pollutants. Noise levels are likely to increase for areas surrounding the portion of the roadway north of the Blackwater River and east of SR 87N since these areas are primarily agricultural and do not have road related noise in the existing condition. The exact effect of increased noise levels on a particular species is difficult to determine.

Wildlife crossing patterns may be minimally affected by construction of either alternative; however, wildlife movement is currently limited in the location of the proposed alternatives by the Blackwater River, Munson Highway, Whiting Field, and SR 87N. The proposed alternatives may result in additional fragmentation of wildlife movement potential, but there is still adequate land around the proposed roadway likely to remain undeveloped or have no land use changes due to protections in the county's comprehensive plan. The proposed bridges will also allow for habitat connectivity beneath the bridge and will minimize indirect impacts to wildlife movement.

New and existing roadways have the ability to negatively impact waterways and wetlands due to increased runoff that may contain harmful pollutants. The design of both alternatives will take the runoff into consideration and will adhere to State regulatory criteria to avoid and minimize impacts to aquatic systems. The proposed design will include a drainage and stormwater management system that would provide for pretreatment of stormwater runoff prior to discharge into any wetlands, Clear Creek or its tributaries, and Blackwater Creek and its tributaries. Due to the

implementation of the stormwater design, indirect impacts to water quality will be minor as a result of either alternative.

5.5.2. Cumulative Impacts

Cumulative impacts result from the total effect of the proposed project when added to other past, present, and reasonably foreseeable future projects or actions (40 Code of Federal Regulations (CFR) 1508.7 and 50 CFR 402.02). As discussed in Section 2 (Purpose of and Need for Action), in the case of the proposed project (which is defined as Alternatives 1 and 2), the purpose and need for a roadway connecting SR 87S with SR 87N is in response to growth and development projects that have already taken place or are reasonably expected to occur and have necessitated a more direct and efficient hurricane evacuation route from coastal areas. The construction projects outlined in Section 1.2 will not provide any additional capacity to the roadways within the study area and will not assist the roadway network in supporting the growth in the area. In addition, there are planned projects for widening on SR 87 just north of Whiting Field. This may put more pressure on the need for this new corridor. Those widening projects are not currently funded in the FDOT District 3 Work Program.

Most of the area around the project is rural, private property with active silvicultural stands and agricultural operations. Future changes to the land uses surrounding the road are difficult to quantify and assess; however, the future land use map shows the land areas adjacent to the proposed roadway are zoned primarily as agriculture, public, industrial and recreation/conservation. Development expansion will also be limited by the following:

- Whiting Field has buffers that cannot be encroached upon by development
- The majority of the property north of US 90 is in public ownership and is primarily developed.
- The FDEP would likely object to any development of lands within the Florida Forever desired acquisition areas located north of the two alternatives.
- Those undeveloped lands that are not protected by public ownership are located within designated floodplains, and therefore are not likely to be developed.

The SR 87 Connector is proposed to be a divided highway. The proposed access management for the resulting alternatives was determined to include a restrictive median with full median openings spaced at ½ mile, directional openings spaced at ¼ mile and limited driveway/side street connections (Access Class 3). These restrictions will assist in the reduction of potential urban sprawl in the location of the conservation areas adjacent to Whiting Field.

6. COMMENTS AND COORDINATION

6.1 Introduction

A Public Involvement Program (PIP) has been developed and is being carried out as an integral part of the project. The purpose of this program is to establish and maintain communication with the public at-large and individuals and agencies concerned with the project and its potential impacts. To ensure open communication and agency and public input, the Department has provided, early in the project process, an AN package to 79 federal, state and local agencies and other interested parties defining the project and, in cursory terms, describing anticipated issues and impacts. In addition, in order to expedite the project development processes, eliminate unnecessary work, and provide a substantial issue identification / problem solving effort, the Department has carried out the scoping process as required by the Council on Environmental Quality (CEQ) Guidelines. Finally, in an effort to resolve all issues identified, the Department has conducted an extensive interagency coordination and consultation effort, and public participation process. This section of the document details the Department's program to fully identify, address, and resolve all project-related issues identified through the PIP.

A portion of this project was submitted for ETDM screening as Project #2861, and a Screening Report was published on February 19, 2008. A new submittal on December 14, 2009 was published as Project # 12597 to expand the boundaries to what is now the SR 87 Connector Study Area.

The Public Involvement Plan for the SR 87 Connector PD&E Study is in compliance with the PD&E Manual, F.S. Sections 286.0105 and 286.011 and 339.155, Executive Orders 11990 and 11988, CEQ Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA), the ETDM Planning and Programming Manual and U.S. Department of Transportation Order 5610.1C, and Parts 23 and 40 of the CFR. Public participation for this project is solicited without regard to race, sex, color, national origin, age, disability, religion and family status. Persons requiring special accommodation under the Americans with Disabilities Act (ADA) or language services (free of charge), should contact Peggy Kelley (project manager) at 850-330-1517 or peggy.kelley@dot.state.fl.us or Florida Relay 711.

6.2 Advance Notification

The Florida Department of Transportation utilizes the ETDM process to accomplish major transportation project planning with early and continuous coordination with agencies. ETDM is carried out through the use of the Environmental Screening Tool (EST). The EST is a web based interactive database and mapping application that integrates a database of projects with over 550 environmental GIS data layers, an automated environmental screening analysis application, and multiple tools for entry, review, and reporting. The EST includes two screens, a Planning and Programming Screen. The Planning screen is the initial step in the

project development process when projects are being considered for inclusion or prioritization within the cost feasible elements of the LRTP. For this project, it was for inclusion in the West Florida Regional Planning Council LRTP. The Programming Screen follows the Planning screen and initiates the Advance Notification (AN) process. Through this process, federal, state, autonomous regional and local agencies and other interested parties are informed of the existence of this project and its scope. The AN fulfills the project initiation notification as required by Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the President's Executive Order 12372 (Intergovernmental Review of Federal Programs), and the Governor's Executive Order 95-359 (Florida State Clearinghouse). In addition, the AN may also provide notice of FDOT's intent to apply for federal-aid on a project. The AN is also used by FDOT to seek consistency with FCMP. The FDEP is delegated with coordinating the State of Florida's review of federal activities for consistency with the FCMP. FDEP uses the State Clearinghouse (SCH) to facilitate the coordination process. The AN is also a means by which the Florida Department of Economic Opportunity (FDEO) provides comments with regards to a project's compatibility with the Local Government Comprehensive Plans [Chapter 163, F.S.].The Department initiated early project coordination on December 17, 2009, by distribution of an AN package to the Florida SCH and ETAT representatives.

The SCH response package of state agency responses was dated January 29, 2010, and summarized responses of six state agencies, including determination of consistency with the FCMP and objectives of the Department of State's Bureau of Historic Preservation and Office of Environmental Policy. Individual AN packages were also sent directly by the District Three office to multiple federal, state, autonomous regional and local agencies and other interested parties. The following agencies / parties received AN packages. An asterisk (*) indicates those agencies that responded, either through the SCH or directly to the Department's District Three office.

1. *Bureau of Indian Affairs, * Office of Trust Responsibilities - Environmental Services Staff*
2. *Federal Aviation Administration, * Airports District Office*
3. *Federal Highway Administration, Anderson, Linda*
4. *Federal Highway Administration, Kendall, Cathy*
5. *Federal Highway Administration, Mehta, Pritesh*
6. *Federal Transit Administration, Lashore, Tajsha*
7. *FL Department of Agriculture and Consumer Services, Hardin, Dennis*
8. *FL Department of Community Affairs, Donaldson, Gary*
9. *FL Department of Environmental Protection, Milligan, Lauren P.*
10. *FL Department of Environmental Protection, Stahl, Chris*
11. *FL Department of State, Kammerer, Laura*
12. *FL Department of State, McManus, Alyssa*
13. *FL Department of State, Ross, Jennifer R.*
14. *FL Department of State, Yates, Brian*
15. *FL Department of Transportation, Bixby, Marjorie*
16. *FL Department of Transportation, Jobe, James B.*
17. *FL Fish and Wildlife Conservation Commission, Gilbert, Terry*
18. *FL Fish and Wildlife Conservation Commission, Poole, MaryAnn*

19. *FL Fish and Wildlife Conservation Commission, Sanders, Scott*
20. *Florida - Alabama TPO, Paul, Jessica*
21. *Florida Inland Navigation District, * Mr. David Roach*
22. *Miccosukee Tribe of Indians of Florida, Terry, Steve*
23. *Miccosukee Tribe of Indians of Florida, * The Honorable Mr. Billy Cypress, Chairman*
24. *Mississippi Band of Choctaw Indians, * The Honorable Mr. Beasley Denson*
25. *Muscogee (Creek) Nation, * The Honorable Mr. A.D. Ellis, Principal Chief*
26. *National Marine Fisheries Service, Rydene, David A.*
27. *National Marine Fisheries Service, Thompson, Mark*
28. *National Park Service, Barnett, Anita*
29. *Natural Resources Conservation Service, Robbins, Rick A.*
30. *Northwest Florida Water Management District, Bartel, Ron*
31. *Northwest Florida Water Management District, Brooks, Leigh*
32. *Poarch Band of Creek Indians, * The Honorable Mr. Buford Rolin, Chairman*
33. *Seminole Nation of Oklahoma, * The Honorable Mr. Enoch Kelly Haney, Principal Chief*
34. *Seminole Tribe of Florida, Steele, Willard*
35. *Seminole Tribe of Florida, * The Honorable Mr. Mitchell Cypress, Chairman*
36. *US Army Corps of Engineers, Turner, Randy*
37. *US Coast Guard, Frank, David M.*
38. *US Coast Guard, Johnson, Philip R.*
39. *US Department of Health and Human Services, * National Center for Environmental Health Centers for Disease Control and Prevention*
40. *US Department of Housing and Urban Development, * Regional Environmental Officer*
41. *US Department of Interior, * Bureau of Land Management, Eastern States Office*
42. *US Department of Interior Director, USGS-FISC*
43. *US Environmental Protection Agency Bisterfeld, Ted*
44. *US Fish and Wildlife Service, Mittiga, Mary*
45. *US Forest Service, OBryan, Katherine L.*
46. *West Florida Regional Planning Council, Gallagher, John*
47. *West Florida Regional Planning Council, Robinson, Mary*

Hard copy recipients included:

1. *Bureau of Indian Affairs, Office of Trust Responsibilities - Environmental Services Staff*
2. *Federal Aviation Administration, Airports District Office*
3. *Florida Inland Navigation District, Mr. David Roach*
4. *Miccosukee Tribe of Indians of Florida, The Honorable Mr. Billy Cypress, Chairman*
5. *Mississippi Band of Choctaw Indians, The Honorable Mr. Beasley Denson*
6. *Muscogee (Creek) Nation, The Honorable Mr. A.D. Ellis, Principal Chief*
7. *Poarch Band of Creek Indians, The Honorable Mr. Buford Rolin, Chairman*
8. *Seminole Nation of Oklahoma, The Honorable Mr. Enoch Kelly Haney, Principal Chief*
9. *Seminole Tribe of Florida, The Honorable Mr. Mitchell Cypress, Chairman*

10. *US Department of Health and Human Services, National Center for Environmental Health Centers for Disease Control and Prevention*
11. *US Department of Housing and Urban Development, Regional Environmental Officer*
12. *US Department of Interior, Bureau of Land Management, Eastern States Office*
13. *County Commissioner, District 1, The Honorable Jim Williamson*
14. *County Commissioner, District 2, The Honorable Bob Cole*
15. *County Commissioner, District 3, The Honorable Don Salter, Chairman*
16. *County Commissioner, District 4, The Honorable Gordon Goodin, Vice Chairman*
17. *County Commissioner, District 5, The Honorable Lane Lynchard*
18. *Team Santa Rosa Economic Development, Cindy Anderson, PE, Executive Director*
19. *Mayor, The Honorable Guy Thompson*
20. *Councilmember, Ward 1, The Honorable Paul Kilmartin*
21. *Councilmember, Ward 1, The Honorable Buddy Jordan*
22. *Councilmember, Ward 2, The Honorable Patsy Lunsford*
23. *Councilmember, Ward 2, The Honorable Clayton White*
24. *Councilmember, Ward 3, The Honorable Marilyn Jones*
25. *Councilmember, Ward 3, The Honorable Grady Hester*
26. *Councilmember, Ward 4, The Honorable Lloyd Hinote*
27. *Councilmember, Ward 4, The Honorable R L Lewis*
28. *Federal Aviation Administration, Rogers Alden Porter*
29. *Blackwater Heritage State Trail, Gerard Greco, Manager*
30. *NAS Air Operations Department Code N32, Randy Roy, Navy Operational Liaison Officer*
31. *NAS Air Operations Department Code N32, Capt. Enrique Sadsad, Commanding Officer*

FDOT documents the results of the Programming Screen review and the COA determination in the ***Final Programming Screen Summary Report.*** FDOT uses the report as the transition document to the PD&E phase. The ETDM summary report for this project is included in **Appendix B** and additional correspondence with the agencies above is located in **Appendix A**. The summary report includes the responses to the agencies as the 'Coordinators Summary' for each item evaluated.

6.3 Interagency Coordination

This project included a large study area with six build alternatives that were advanced through the PD&E evaluation process; only two were studied during PD&E. The FDOT project team met on multiple occasions with elected officials and concerned agencies to ensure the corridor locations were a good fit for all involved. In addition, four of the corridors received red flags as part of the initial evaluation process, and meetings were also held to discuss the options for those four corridors specifically.

6.3.1 Agency Meetings

Agency Meeting March 24th, 2010: This meeting was held with a variety of Agency representatives at the FDEP Douglas Building, OIP Conference Room #953B. The following Agency representatives attended the meeting:

FDOT (District 3) D3: Peggy Kelly
DEP/OIP: Lauren Milligan
DEP/Office of Greenways and Trails (OGT): Rick Halvorsen
DEP/OIP: Chris Stahl
DEP/OGT: Marsha Connell
Department of Agriculture and Consumer Services, Division of Forestry (DOF): John Waldron
DOF: Dennis Hardin
Department of State Lands (DSL): Gloria Barber
DSL/ Office of Environmental Services (OES): Marianne Gengenbach
DSL: Tom Butler
DSL: Kime Laudes
Metric (Metric Engineering, Inc.): John Flora

Purpose of Meeting: To address the red-flagged comments made by FDEP on Corridor Alternative 3A, and the red-flagged comments made by the NWFWMD on Corridor Alternative 4, the FDOT and Project Team arranged to meet with FDEP and the Florida Division of State Lands to discuss the environmental issues and the limitations on the State lands and the lands adjacent to the State lands.

Meeting Comments Summarized: The FDOT project team asked for clarification on the red flag on Corridor 3 when the properties were only planned purchases and were not currently Florida Forever Lands. DEP stated that the red flag was for indirect/secondary impacts due to isolation of currently owned parcels. DEP stated that though Corridor 2 also traversed planned purchases, it would not isolate any current properties and did not warrant a red flag. DEP also felt that due to the extensive planning work done by the county and by the Whiting Field Naval Air Station on the Joint Planning Area which included a proposed roadway in the vicinity of Corridor 3, another meeting should be held to include the county staff.

Discussion continued about Corridors 4-6 that were flagged by the NWFWMD. The FDOT project team asked about the funding source for the linear island properties in the Blackwater River and their allowed use. In addition, the team added the lands would be spanned by structure. A future meeting was determined to be needed so the agency could look into the funding sources. In addition, DEP stated the bridge crossing for the northern corridors was in the best possible location and they did not have a problem with that crossing.

It was decided the FDOT project team would put together a list of questions to be discussed at a future meeting.

Agency Meeting May 21st, 2010: This meeting was held with a variety of Agency representatives at the FDEP Carr Building. The following Agency representatives attended the meeting:

FDOT/D3: Peggy Kelley
DEP/OIP: Lauren Milligan
DEP/OIP: Chris Stahl
DEP: Amy Phillips
DEP/OGT: Rick Halvorsen
DEP/OGT: Jim Wood
DEP/OGT: Gerard Greco (via teleconference)
DOF: Dennis Hardin
DOF: Corinne Hermle
DSL: Deborah Poppell
DSL: Gloria Barber
DSL/OES: Marianne Gengenbach
DSL: Tom Butler
DSL: Kime Landes
NWFWMD: Paul Thorpe
Santa Rosa County: Nancy Model
Santa Rosa County: Mary Ann Vance
Metric: John Flora
Ecological Resource Consultants (ERC): Dan Van Nostrand

Purpose of Meeting: The purpose of the meeting was to continue mitigation discussions regarding the disputes that had been placed on two of the four Corridor Alternatives for the SR 87 Connector. Specifically, the two primary objectives of the meeting were to:

1. At the March 24th mitigation meeting, DEP and DSL had tasked FDOT with assimilating a list of questions associated with the disputes. The discussions at this meeting were to review the answers provided by DEP and DSL regarding both Alternative 3A, and Alternative 4.
2. It was the intent to afford both Santa Rosa County staff, and a representative from the Naval Air Station Whiting Field, the opportunity to discuss the intent of the Team Santa Rosa initiative, and the intent behind the Joint Planning Agreement that enabled the purchase of the conservation lands northeast of Whiting Field that were the cause of the dispute issued on Alternative 3A.

Meeting Comments Summarized: Both the County and NASWF representative stated that it had always been the intent to have a four-lane road north of Whiting Field. The County Planner added considerable efforts had been made to develop a connector from the Gulf to I-65, and the Joint Planning Area had been developed in conjunction with NASWF with conserving areas in the vicinity also a priority. The County representative stated the County Commissioners were concerned about the elimination of Corridor 3 without justification. In addition, OGT asked about the

colocation of the BHST in the corridor and that they would need to be involved if the trail right-of-way were to be used. In addition, if the trail were crossed, they would want a grade separated crossing. The FDOT Project Team requested documentation that allows DEP and DSL governing authority over planned purchases to assist in any possible corridor elimination.

Discussion continued about Corridors 4-6. The NWFWMD representative stated that the funds had been researched and the islands were initially purchased with Florida Forever Funds. The DSL representative stated that if there are any other viable alternatives, the governing board could not easily approve the impact. The FDOT Project Team asked for documentation to support the elimination of Corridors 4-6.

The FDOT asked the group if there were any concerns about Alternatives 1 or 2 that need to be addressed. The DEP representative asked that Corridor 2 be moved as far west as possible, but that the concerns were nothing like the concerns about Corridor 3. The County representative added that it would be the county's desire to get the connection as far north as possible to more effectively serve emergency evacuations.

6.3.2 FHWA Meeting

FDOT representatives met with FHWA personnel at the FHWA office located at 545 John Knox Rd, Suite 200, Tallahassee, on March 25th, 2010. The following representatives attended the meeting: George Hadley, FHWA; Cathy Kendall, FHWA; Brandon Bruner, FDOT; Peggy Kelley, FDOT; and John Flora, Metric.

Purpose of Meeting: For FHWA to make a determination on the project's Class of Action, and to review comments that were submitted by the ETAT members.

Meeting comments summarized: The FHWA representative stated the logical termini made sense. In addition, he stated that even if Corridors 3 and 4 (4-6) were eliminated, he would like to leave the COA as an EIS, instead of an EA to be conservative. In addition, he added the analysis should be for the full build out scenario. In addition, after questions from the FDOT Project Team, he stated crossing the BHST would not constitute a 4(f) impact. However, the US 90 trail is Historic and the issues are different. The FDOT Project Team stated that the US 90 Trail would be handled as a historic site with the State Historic Preservation Officer.

Notice of Intent: Following this meeting, FHWA approved the Notice of Intent on August 24, 2010. It was published in the Federal Registry on August 31, 2010. Please see Appendix A, Project Meetings and Correspondence, for copies of the meeting minutes and Notice documentation.

6.3.3 Scoping Meeting

On July 29, 2010 a Scoping Meeting was held for the SR 87 Connector PD&E Study at the Santa Rosa County Commission Chambers. The meeting was open to the public and advertised in the Florida Administrative Weekly. The following people / agencies were sent a formal invitation:

Florida Department of Agriculture – Division of Forestry
Florida Department of Environmental Protection – Branch office
Florida Department of Environmental Protection – District Office
Florida Department of Environmental Protection – Office of Environmental Services
Florida Department of Environmental Protection – Land Management Advisory Council
Florida Department of Environmental Protection – Office of Greenways and Trails
Florida Department of State – Division of Historical Resources
Florida Fish and Wildlife Conservation Commission – Division of Marine Fisheries
Florida Fish and Wildlife Conservation Commission – Office of Environmental Services
Florida Fish and Wildlife Conservation Commission – Regional Office
National Oceanic and Atmospheric Administration – National Marine Fisheries Service's Regional Office
State Department of Community Affairs
US Army Corps of Engineers – Branch and Permit Sections
US Coast Guard – Eighth District
US Department of the Interior – Bureau of Indian Affairs
US Department of the Interior – Bureau of Land Management
US Department of the Interior – U.S. Fish and Wildlife Service
US Environmental Protection Agency – Ecological Review Branch
US Forestry Service
Northwest Florida Water Management District
Chairman Gordon Goodin, Santa Rosa County Commission
Beckie Cato, Planning Director, Santa Rosa County
Nancy Modal, Planner 3, Santa Rosa County
Wes Meiss, President Historical Society, Santa Rosa County
Cindy Anderson, PE, Executive Director, Team Santa Rosa
Terry Joseph, West Florida Regional Planning Council
Bob Cole, Chairman, Florida Alabama TPO
Guy Thompson, Mayor, City of Milton
Randy Roy, NAS Air Operations Department
Vernon Compton, Nature Conservancy
Gerard Greco, Manager Blackwater Heritage State Trail
Martin Knopp, Federal Highway Admin
Cathy Kendall, Federal Highway Admin
Chief Amy Oliver, Public Affairs, Eglin Air Force Base

Pete Hall, Captain Whiting Field
Ryan Arvay, Mainstreet Milton

Meeting comments summarized: Commissioner Goodin commented that any planned purchases of Florida Forever Lands that are owned by the County should not be considered as obstacles for this study. In addition, he noted a landfill near Corridor 1C. He also asked about mitigation options for Corridor 3 and that he would make sure to ensure right-of-way will be allotted in the future before any future purchases are made.
The Nature Conservancy representative asked for more information from the Project Team about the impacts to the Trail.

The FDOT Project Team reviewed the Public Involvement activities to date and some of the comments received. The general consensus being the Historical Society in Milton wants the southern corridors and the County officials want the northern corridor. In addition, the spur option for Corridor 1 and 3 were brought up in an effort to assist the access to the county's industrial complex.

The Environmental impacts were reviewed as well, with discussions on possible imperiled species, habitat impacts, etc.

The discussion continued with the fact this project is trying to serve two separate purposes, dealing with daily traffic on US 90 and offering hurricane evacuation and connectivity to the military base and the County's industrial park. Commissioner Goodin added that this is two different projects.

The meeting was followed by a field review.

6.4 Public Involvement

Another key aspect of the Public Involvement Program (PIP) of this project has included numerous meetings with interested parties other than the Federal and State environmental permit and review agencies. These included elected public officials, representatives of public agencies, and citizen's interest groups of many kinds. The PIP is included as **Appendix J**. The extensive record of coordination referenced throughout this document illustrating numerous project coordination meetings with elected public officials, public agency representatives and citizen's interest groups is contained in **Appendix A**.

6.4.1 Meetings with Elected Officials

Several Elected Officials Meetings were held. The first Elected Officials meeting was held on March 9th, 2010 with the City of Milton City Council members at their regularly scheduled meeting at Milton City Hall. The next meeting was with the FL-AL TPO during their regularly scheduled commission meeting on March 10, 2010. In

addition, we met with the Santa Rosa County Commissioners during their regularly scheduled commission meeting on March 18, 2010.

These were introductory type meetings and most of the comments received from these meetings were general location comments, not leaning for or against the northern or the southern corridors; however, the comments from the Santa Rosa County Commission seemed to be favorable to the northern Corridors, especially Corridor 3. Several commented at this meeting that Marty Martin Way should be utilized.

6.4.2 Public Kick-Off Meeting

A public kick-off meeting was held at the Santa Rosa Auditorium on March 23, 2010. All elected officials and property owners in the affected areas were invited. Approximately 490 invitations were sent to property owners who were within 300 feet of the centerlines of the corridors. A total of 156 people attended the meeting for a total of 32% attendance.

Nineteen comments were received associated with this meeting. Some of the comments were split between two different routes which they prioritized. The following is a breakdown of responses:

- Corridor 1 – Corridor 1 was liked by one commenter because it provided economic benefits without impacting Whiting Field. However, two disliked Corridor 1 because it would potentially divide the City and could leave US 90 as a Failing Roadway (this comment was for all northern routes).
- Corridor 2 – Two comments were received directly for Corridor 2. One comment was the same as above, that it would divide the City. In addition, one commenter stated they disliked that Corridors 2 and 3 encroach on Whiting Field. Corridor 2 was also commented on as one of the Northern Corridors that may leave US 90 Failing.
- Corridor 3 – Corridor 3 was liked by two for hurricane evacuation, less impact to homes, Whiting Field and Milton Industrial Park Access, and it may allow growth further north. Two comments were received against Corridor 3 because of the environmental concerns and terrorist threats. In addition, another commenter stated they disliked that Corridors 2 and 3 encroach on Whiting Field.
- Corridors 4-6 (these comments did not specify a particular ending and they also generalized them into the ‘Southern Corridors’) - 14 positive comments were received for the Southern Corridors. The reasons generally included improved US 90 traffic conditions, serving Milton residents near downtown and supporting historic downtown. One negative comment was that a bridge in this location would hurt pleasure boaters.
- One Commenter stated that adding lanes through Milton on US 90 in its existing Location is the best alternative.

The following is a synopsis of the verbal comments that were received at the meeting by our staff.

- There were 5 negative comments on the southern corridors. Two wanted the FDOT Project Team to look at one-way pairs, one wanted us to know about a church in the west end of the alignment, one wanted us to know we were impacting family property and one wanted us to know about the historic mill location in which Milton got its name. All stated they would wait until the preferred corridor is chosen as the corridor location could be shifted to miss these items.
- There were 2 comments, one from a Greenways and Trails employee and one by a gentleman who called himself the 'Father of the Blackwater Heritage State Trail'. They wanted to ensure that there would be little to no impacts to the Trail. They also expressed dislike for an at-grade crossing of the Trail.
- We had 1 comment about Corridor 1 stating that it follows a power line. This property owner expressed that DOT will have to 'pay me' for my property adjacent to the power line. He wants to wait until the preferred corridor is selected for further comments.
- There was one comment about a historic cemetery near the convergence of alignments 1, 2, and 3. (The project team located this cemetery and collected a GPS point of its location).

6.4.3 Public Corridor Meeting

A Public Corridor meeting was held at the Santa Rosa County Auditorium on January 27, 2011. All elected officials and property owners in the affected areas were invited. A total of 686 invitations were sent to property owners who were within 300 feet of the centerlines of the corridors. 149 people attended the meeting for a total of 22% attendance.

Ten comments were received through both the website email and regular mail associated with this meeting. Some of the comments were split between two different routes which they prioritized. The following is a breakdown of responses:

1. The engineering plan must provide an extra right lane on Hwy 90 and Hwy 87 South, as we turn right from Hwy 90 (going east) to Hwy 87S. There must be a right extra lane for Punjob Road. Punjob Rd is 200' south of Hwy 90 and 87S. Please send me the name and telephone number of the Engineering firm designing the road layout. (the request for a turn lane on Punjob Rd was sent to FDOT and a traffic analysis was performed)

2. If at all possible, we would like the BHST to be undisturbed, since we bike there several times monthly and consider it Milton's greatest asset.

3. In trying to determine the best option for a hurricane evacuation route, options 1 and 2 do not move the traffic far enough north. They both will cause congestion and bottleneck traffic where they intersect with Hwy 87/89. The best option is Corridor 3. It provides the most northern route which moves traffic away from congestion as traffic moves north on Hwy 87. Also, Corridor 3 opens a route through the northern part of the county and would provide additional access for Whiting Field. It would also provide a more direct route for commercial traffic from I-65 to the Industrial Complex off Hwy 90 in East Milton.

4. I fully support Corridor #1. Thank you for holding public meeting to explain the project and have all of the information available.

5. The map on the handout should be on a separate 8 ½ x 11 sheet. It is very difficult to read. (the map was posted on the website, and a larger map was handed out at future meetings)

6. The Morton Cemetery is located on Pat Brown Road and is a historical site. Jefferson Morton one of the founders of Milton is buried there as many other citizens of Milton and Santa Rosa County. I would not like to see this site disturbed. Why not plan for 4 lanes vs. 2 lanes. By the time this project is complete, we will probably need 4 lanes.

7. I would like to request a map of the proposed road.

8. Your planned Corridor #1 makes the most sense. Less intrusive, shortest route, and probably less expensive. I hope you proceed with this corridor.

9. The City of Milton resubmitted their previous comments.

10. I would like to know exactly where the right of way boundaries will be on the north side of Oakland Dr. and how it will affect my property. I have a cemetery in my front yard. It is quiet and peaceful here and not much traffic. I would also like to have all the property ID numbers and contact information for each proposed corridor. I would like all information mailed to me as soon as possible. (The property owner was contacted and the cemetery was a pet cemetery. The proposed ROW for this alternative follows the property lines and does not cross into her property. The ID numbers request was given to the FDOT attorney)

6.4.4 Public Alternatives Workshop

A Public Alternatives workshop was held at the Santa Rosa Auditorium on August 16, 2011. All elected officials and property owners in the affected areas were invited. A total of 686 invitations were sent to property owners who were within 300 feet of

the centerlines of the corridors. There were 86 people in attendance at the meeting, for a total of 13% attendance.

Twenty five comments were received through both the website email and regular mail. We asked everyone to mark a preferred route; Alternative 1, Alternative 2 or Neither. The following is a breakdown of responses:

1. Alternative 1. The City of Milton resubmitted their previous comments.

2. Proposal 2a needs to be moved away from the entrance to Harvest Point as there will likely be 400-500 homes in this subdivision all competing for the proposed traffic light. Please go 650 feet north or about 1300 to the north line of our property. This will be far less intrusive and less expensive for DOT. We have a paved road of about 1000 ft. along your proposed path that we will lose use of. On north side of property there is a parcel left along the holding pond for a road. Thank you for your consideration.

3. Please send a copy of "boards." Mostly concerned with south section.

4. Alternative 1. Out of the alternatives, I prefer Alternative 1 as it will best serve the most urbanized area and not encourage urban sprawl. As the closest route to the City of Milton, Alternative 1 will provide a strong connection to job centers at the Santa Rosa County Industrial Park and Jail Complex. I commend the planning effort to date related to pedestrian and bicycle features, connectivity, and safety. The inclusion of a multiple use path and bike lanes will provide alternative forms of transportation corridors within the area and the job centers. Please keep these features in the future plans for the road and do so for the entirety of the road. One improvement I would recommend for the corridor and that is to have the BHST cross the new road by means of an underpass or overpass. Requiring an at-grade crossing would be an unnecessary safety flaw on the design of the road. As a major recreational trail in Santa Rosa County I highly encourage the design of a crossing for the trail either under or over the road. Thank you for the opportunity for input.

5. Alternative 1. I also like the Urban plan that provides biking and walking trails to the roadway itself. I think Alternative 1 is the best choice. This was a good public workshop. Thank you.

6. Alternative 2. This was a frustrating meeting. Ten minutes total, the first two of which was ruined by rude people talking in the back of the room. Why were no questions addressed from the floor? Many of the same questions could have been answered simultaneously. I did get my questions answered by a young man from Marianna. I see this as an asset for storm evacuation from the south of the county but as a general relief from US 90 traffic, I don't think it will be greatly utilized. Looking at the timeline, is the next public hearing in 2013? And, last but not least, I

would strongly oppose the use of Federal funds to build this road. $ from Washington has got to stop.

7. Alternative 2. Seems logical to me that the farther north this can go the less impact it will have on local traffic roads, etc.

8. Alternative 2. 2a should be used for the following reasons: (1) 1c dead-ends into SR 89N. If a hurricane evacuation is needed, there will be tremendous congestion and delay in going north up 87N. (2) If 2a is used, traffic would have 2 roads directly to use going north, i.e. 87 N and 89N. Also, if traffic finally becomes too severe, an overpass could be constructed over 87N onto 89N and avoid highway congestion from a hurricane. If 1c is used, no second road way would be available to accept hurricane traffic without first going through a congested residential area where a Wal-Mart store may be constructed.

9. Alternative 2. I live in Milton. I believe that the best option for the evacuation route is 2a the northern route. The lower route (1c) will increase traffic through more populated residential areas, not only during the evacuation process, but routinely as well. I would be directly impacted by the more southern route on a daily basis with people using Oakland, Kembro, Twilight Dr. and Cherokee as a cut through to Pine Blossom and from there either north or south. This path through the residential areas is a common shortcut and would increase significantly should the connector dump into the intersection of 87/89 and Oakland Dr.

10. Alternative 1 and 2. (1) Cross walk for trail is not safe. At grade does not provide safe passage for 2 (split lane) or 4 lane crossing of state trail. Elevate or bridge over. (2) Historic SR1 crossing needs better design with safety medium or over/under. Need to plan to the future with 4 lanes and turn lanes. Just painting lines on the cement is not good enough. (3) I like the separate walkway with grass area between road and walkway – good design.

11. I am writing in regards to the SR 87 Connector Project. I am NOT in favor of either of the two remaining alternatives. Rather.... I am in favor of a southern alternate route. Even though the routes that constituted a southern alternate have been removed, it is my hope that the FDOT will look more closely at this issue and realize that a huge mistake has been made by eliminating it. The two remaining alternatives are further north of town, and would ultimately result in more negative urban sprawl. This would impact sensitive wet lands and create more commercial development near NAS Whiting Field. Such development is not only incompatible with the base's mission, but it also threatens its mission. (The base is the key economic back bone of Milton). In addition, a southern alternate was identified as the most cost effective and would offer more, far reaching transportation solutions, benefiting both Hwy. 87 and 90. A southern

alternate was ranked as having the least impact on the environment. Ironically, the southern alternate was omitted from the study because it crosses Florida Forever lands. This can very easily be mitigated by Florida state policy. However, this was never pursued, despite the route being more cost effective and more beneficial to the community overall. Why was this? The southern alternate was even chosen as the preferred route in a city wide survey by a two-thirds majority. This was in large part due to connectivity but also the protection the route offers to the Milton Historic District. Plus, being closer to town it will not perpetuate as much sprawl. There are many unanswered questions as to why this route was not included in this part of the study, when it is such a positive selection. More consideration must be given to a southern alternate of some kind. Thank you!

12. Neither. (Southern Route) Each of these routes has many environmental impacts. Cost much more and will make the BHST unsafe to travel at Munson Highway. There needs to be an under or over pass for the trail if one of these routes is chosen. We need a southern route around downtown Milton. Get truck traffic off Hwy 90. Have the old Bagdad Hwy. Southern route cut south of Henry St. to Ward Basin Rd so the traffic can get to I-10. This would be less of an environmental impact than either of the alternatives. No four lanes down Hwy 90 in downtown Milton or pairs down Hwy 90 and Berryhill Rd. The City of Milton Council has voted several times to endorse the southern route. A citizens' survey was taken by the city with a two to one majority for the southern route. Please consider all alternatives before choosing just #1 or #2.

13. Neither. (Southern Route) Public input was seemingly ignored by the consultant who seemed to be against preferred southern route from beginning.

14. Neither. (Southern Route) The vast cost and environmental issues it will cause in the area of the proposed alternative 1 and alternative 2, there are bald eagles, gophers, and flatwood salamanders.

15. Neither. (Southern Route) In a city survey, citizens favored the southern route 2 to 1. It was also the most economical.

16. Neither. (Southern Route) Milton needs to keep the connection to stay in Milton so it will continue to grow and revitalize. It will also help the levels of traffic on several roads, and it makes the most sense financially.

17. Neither. Please put the southern route back on there for businesses in downtown Milton.

18. Neither. Please consider the other route because we need the traffic in front of our local businesses.

19. Neither. Please consider the southern route again. Downtown businesses need the traffic.

20. Neither. Need the road downtown to promote local businesses.

21. Neither. Not using southern route takes too much business off Hwy 90.

22. Neither. The vast wildlife in the area is nothing less than pristine. The negative impact on Blackwater River would be terrible to our local environment.

23. Neither. Southern route is preferred. With both Alternative 1 and Alternative 2, downtown businesses will be bypassed all together. Southern route allows a faster route without avoiding the area altogether. Northern routes encourage sprawl and development in an area around NAS Whiting Field we are "supposedly" trying to protect.

24. Neither. The bypass would be detrimental to the business community and a toll way would not be cost efficient.

25. Neither. With the planned paths near Whiting Field you are destroying a forest along with causing urban sprawl near the base.

6.4.5 Newsletters and Internet Website

Four newsletters were sent to interested parties and the public. Any elected or public official and/or interested party that contacted the project team by email was emailed a newsletter and any property owner within 300 feet of the viable alternatives was mailed a newsletter. In addition, the PIP included the creation of an internet website at (http://www.sr87connector.com) for the benefit of the general public.

6.4.6 Meetings with Interested Parties

On August 7th, 2012, Project Team members met with the FL-AL TPO Bicycle/Pedestrian Advisory Committee to discuss the proposed grade separated intersection of the SR 87 Connector with the BHST. The Team members brought visual aids of the proposed intersection. The Committee was very complementary and approved of the grade separation as well as the connection proposed to the trail along the new roadway.

6.5 Official Statements

Official statements of concurrence by municipal, county, state and/or federal agencies are anticipated following the project's Public Hearing. An official letter from the City of Milton was given to the project team stating their preference of Alternative 1, and included a unanimously passed resolution stating this preference, see **Appendix A** (September 2010). In addition, four County Commissioners from Santa Rosa County formally agreed to support Alternative 1; however, they added their desire for a spur to the Whiting Aviation Park and would like the FDOT to review a southern bypass. The Department will not make a final decision on the proposed action or any alternative until a public hearing has been held on this project and all comments received have been taken into consideration.

7. COMMITMENTS AND RECOMMENDATIONS

7.1 Commitments

- The Blackwater River will be bridged and construction will be conducted during nonspawning periods to avoid direct impacts to both Gulf sturgeon critical habitat and individuals.
- All construction methods will be consistent with the "Construction Special Provisions – Sturgeon Protection Guidelines" to minimize construction related impacts.
- The pond areas within the Reticulated Flatwoods Salamander critical habitat unit will be bridged to reduce direct impacts to both the critical habitat unit and individuals.
- Indirect impacts to the RFS habitat will be minimized through the location and placement of stormwater treatment from elevated roadways so that the treatment areas do not impact the critical habitat unit.
- Eastern indigo snake protective measures will be followed during construction to avoid impacts.
- Manatee protective measures will be followed during construction to avoid impacts.
- Prior to construction, a survey for the gopher tortoise will be conducted. If individuals are present within the project impact area, appropriate permits will be obtained for the relocation of the tortoises.
- A site-specific survey will be conducted to determine the presence or absence of bald eagle nests in or near the construction zone.
- Noise abatement analysis will be conducted during the design phase of this project.
- Any unused ROW purchased for future expansion will be left in its natural, generally un-impacted state until such time as it is needed for the proposed expansion to 4 lanes.
- All commitments made as terms and conditions of the Biological Opinion (Appendix I) will be fulfilled.
- Proposed stormwater treatment pond(s) shall avoid direct discharge to Cooper Basin. Cooper Basin is located downstream from the proposed bridge crossing and is connected to the Blackwater River, an Outstanding Florida Water. Cooper Basin is a known breeding area for Gulf Sturgeon *(Acipenser oxyrinchus desotoi).*

7.2 Commitments to Local Government/Agencies

Local Governments

- Commitment to Santa Rosa County and the Town of Milton: To build the proposed facility into two phases, beginning with phase one as a two-lane facility with bike lanes and a multi-use path connecting the Historic SR 1 Trail and the BHST. Phase

two would be built as traffic demand dictates, and would be a four-lane facility with bike lanes and will retain the multi-use path.

- Commitment to Santa Rosa County and the Town of Milton: In coordination with FHWA, the ROW for the build-out, including stormwater ponds, of the proposed facility would be purchased during the initial ROW acquisition stage.
- To enhance alternative modes of transportation by linking existing multi-use trail facilities.
- To gain public support by providing a landscaped enhanced corridor as part of the proposed facility.

FDEP/OGT

- To provide grade separation between the proposed facility and the BHST to avoid the Section 4(f) impacts. No bridge pilings or other infrastructure will be installed within the trail corridor.
- To provide a connection between the proposed facility's pedestrian features and the BHST.

State Historic Preservation Officer

- To provide a safety enhanced at-grade trail crossing for the proposed SR 87 Connector's crossing of the SR 1 Historic Trail along US 90.

USFWS

- To bridge the RFS Habitat area as defined by USFWS.

FEMA

- To bridge the entire Blackwater River Regulatory Floodway.

USCG

- The Blackwater River and Clear Creek Bridges are exempt under the Surface Transportation Authorization Act from Coast Guard Permitting. However, per the USCG correspondence dated 5/3/12 and 6/26/2014 (See Appendix A), USCG required lighting and other signals are not exempt. The subject Act which amended Title 23 U.S. Code, to include 23 U.S.C 144(c), did not exclude this category of bridges from the application of 14 U.S.C.85.

7.3 Recommendations

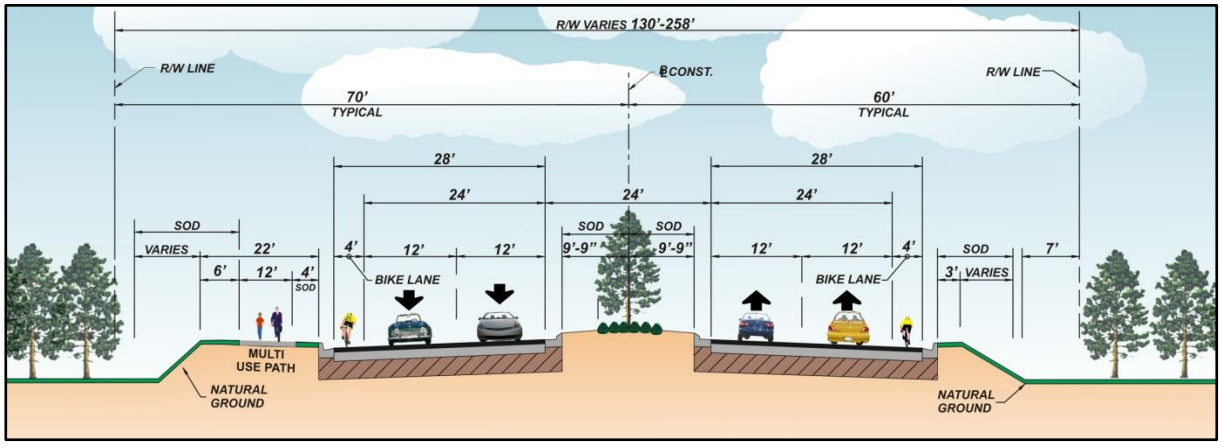
Due to the similarities in the two alignments, no preferred alternative will be presented in this document. The results of the alternative selection process indicate that both alternatives have similar impacts and provide similar benefits. This process reviewed engineering criteria such as safety, costs, traffic analysis, and multimodal implications. It

took into account environmental impacts to wetlands, threatened and endangered species, noise, air, contamination, etc. It also included studying socio-economic factors such as hurricane evacuation, community and cultural resource impacts, historic site impacts, Section 4(f) impacts, and relocation impacts. Likewise community and agency input has also shaped the type and location of the alternatives, as well as the features, such as the connection to the BHST. FHWA will make the final determination on a preferred alternative once alternative impacts and agency comments on this EIS and public input resulting from the public hearing have been fully evaluated. Unless new information is brought forward through the public and agency comment period, FHWA intends to select the preferred alternative and will issue a combined Final Environmental Impact Statement and Record of Decision (FEIS/ROD) in accordance with Pub. L. 112-141, 126 Stat. 405, Section 1319(b). If FHWA selects another alternative based on public or agency input, FHWA will issue a separate FEIS and ROD in accordance with 23 CFR 771.

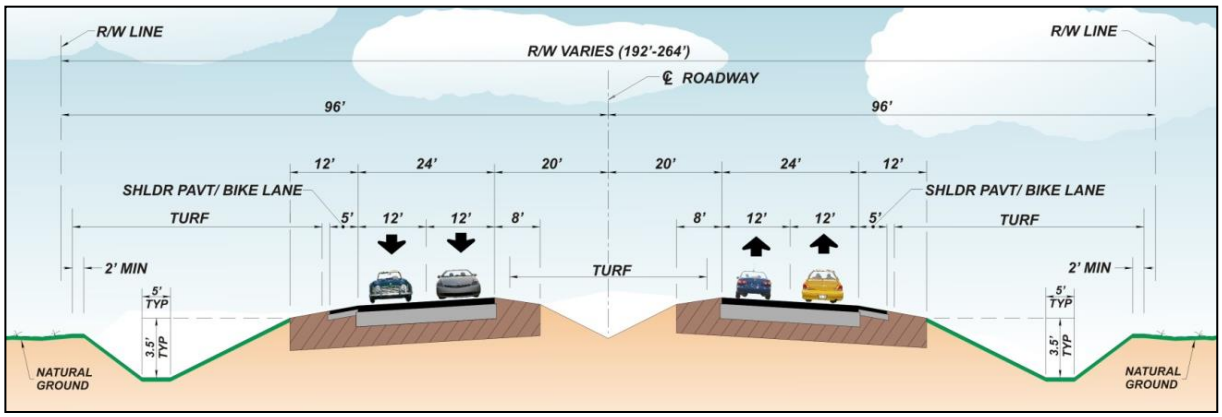
Both Alternatives consist of constructing the SR 87 Connector from the US 90/SR 87S intersection crossing the Blackwater River in the proximity of the existing eastern power easement crossings. Once across the river, they will run parallel or adjacent to the power easement. Alternative 1 will connect with SR 87N just north of the convergence of SR 87N and SR 89 for a total length of approximately 6.5 miles. Alternative 2 will connect with SR 87N north of Alternative 1 at the divergence of SR 89, realigning that intersection, for a length of approximately 8.2 miles.

Both Alternatives are proposed as four lane, restricted access, divided highways with two sets of twin two lane bridges over the Blackwater River and Clear Creek and over the BHST. Both Alternatives are south of the Whiting Field Naval Air Station. The proposed roadway typical will also provide a 12 foot multi-use path on the west side of the roadway from the Old SR 1 Trail to the Blackwater Heritage State Trail. It is the intent for the project to initially build an interim two lane facility and as demand increases, the road would be expanded to four lanes to ultimately match the urban four lane typical section at the existing SR 87S and SR 87N. As the Connector enters into less constrained areas north of the Blackwater River, a rural typical section is being recommended. The following illustrations depict the proposed typical sections.

Proposed Urban Typical Section



Proposed Rural Typical Section



Project cost estimated associated with the proposed improvements are as follows:

Alternative Improvements	Construction Cost Estimate	Right-of-Way Cost Estimate
Alternative 1	$116,781,000	$5,058,000
Alternative 2	$120,410,000	$5,626,000

8. LIST OF PREPARERS

FEDERAL HIGHWAY ADMINISTRATION

Buddy Cunill Environmental Programs Coordinator	38 years of experience
Jorge Rivera, PE District 3 Transportation Engineer	B.S. degree in Civil Engineering
Joseph Sullivan Environmental Specialist	B.S. degree in Soil and Water Science 15 years experience in environmental analysis and State and Federal permitting.
Cathy Kendall, AICP Environmental Specialist	B.S. and M.S. degrees in Urban and Regional Planning 20 years experience in environmental analysis and documentation

FLORIDA DEPARTMENT OF TRANSPORTATION

Peggy Kelley Project Manager	6 years of experience
Joseph Bruner, PE Environmental Manager	B.S. degree in Civil Engineering 13 years of experience
Laura Haddock Environmental Document Reviewer	B.S. in Biology, B.S. in English 7 years of experience

CONSULTANT FIRMS

METRIC ENGINEERING, INC.

John Flora, R.A., AICP Project Manager	Prof. B. Arch. and Urban Planning 26 years experience
William Sloup, PE Project Manager	B.S. Engineering 28 years experience
Raul Driggs, PE Engineering Quality Control	B.S., M.S., Ph.D. degrees in Civil Engineering 44 years of experience

Amy Wiwi, GISP Deputy Project Manager	B.S. Science M.S. Environmental Engineering 12 years of experience
Jessica Bloomfield, PE Project Engineer	B.S. Civil Engineering 11 years of experience

ADVANCED TRANSPORTATION ENGINEERING CONSULTANTS (ATEC)

Fadi E. Nassar, PE, Ph.D. Transportation Engineer	B.S., M.S., Ph.D. degrees in Civil Engineering 21 years of experience

FINLEY ENGINEERING, INC.

Robert Alonso, PE Structural Engineer	B.S. and M.S. degrees in Civil Engineering 7 years of experience
Jerry Pfunter, PE Structural Engineer	B.S. and M.S. degrees in Civil Engineering 19 years of experience

BALMORAL GROUP, INC.

Greg Seidel, PE Drainage Engineer	B.S. and M.S. degrees in Civil Engineering 24 years of experience

ECOLOGICAL RESOURCES CONSULTANT, INC. (ERC)

Martin Gawronski Environmental Scientist	B.S. Environmental Resource Mgmt. 20 years of experience
Bryan Phillips Environmental Scientist	B.S. Zoology, M.S. Aquatic Ecology 12 years of experience

ENVIRONMENTAL MANAGEMENT & DESIGN, INC. (EMD)

Kathy Hale Noise Specialist Air Quality Specialist	B.S. degree in Botany, B.S. degree in Mathematics 42 years of experience

9. LIST OF AGENCIES, ORGANIZATIONS AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT

FEDERAL AGENCIES

Advisory Council on Historic Preservation - Office of Cultural Resources Preservation
Colorado State University - The Libraries, Documents Librarian
Federal Aviation Administration - Airports District Office
Federal Aviation Administration - Regional Director
Federal Emergency Management Agency - Associate General Counsel for Insurance and Mitigation
Federal Emergency Management Agency - Natural Hazards Branch, Chief
Federal Railroad Administration - Office of Economic Analysis, Director
U.S. Army Corps of Engineers - Regulatory Branch, District Engineer
U.S. Coast Guard - Commander (obr) - Eighth District
U.S. Department of Agriculture - Natural Resources Conservation Service, State Conservationist
U.S. Department of Commerce - National Marine Fisheries Service - Habitat Conservation Division
U.S. Department of Commerce - National Marine Fisheries Service - Southeast Regional Office
U.S. Department of Commerce - National Oceanic and Atmospheric Administration
U.S. Department of Health and Human Services – Centers for Disease Control and Prevention
U.S. Department of Housing and Urban Development - Regional Environmental Officer
U.S. Department of Interior - Bureau of Indian Affairs - Office of Trust Responsibilities
U.S. Department of Interior - Bureau of Land Management – Southeastern States Field Office
U.S. Department of Interior - Fish and Wildlife Service, Jacksonville Ecological Services Office, Field Supervisor
U.S. Department of Interior - Fish and Wildlife Service, Panama City Ecological Services Office, Field Supervisor
U.S. Department of Interior - Fish and Wildlife Service, South Florida Ecological Services Office, Field Supervisor
U.S. Department of Interior - National Park Service - Southeast Regional Office
U.S. Department of Interior - Office of Environmental Policy and Compliance, Director
U.S. Department of Interior - U.S. Geological Survey Chief
U.S. Department of State - Office of Environment, Health and Natural Resources
U.S. Environmental Protection Agency - Office of Federal Activities, NEPA Compliance
U.S. Environmental Protection Agency - Region IV, Regional Administrator
U.S. Environmental Protection Agency - Region IV, Ground Water Drinking Water Board

STATE AGENCIES

Florida Department of Environmental Protection – Florida State Clearinghouse
Florida Department of Economic Opportunity
Florida Department of Health
Florida Department of State - Division of Historical Resources
Florida Fish and Wildlife Conservation Commission

LOCAL AGENCIES

City of Milton
Santa Rosa County Planning Department
Florida-Alabama Transportation Planning Organization
West Florida Regional Planning Council
Northwest Florida Water Management District, Executive Director

10. INDEX